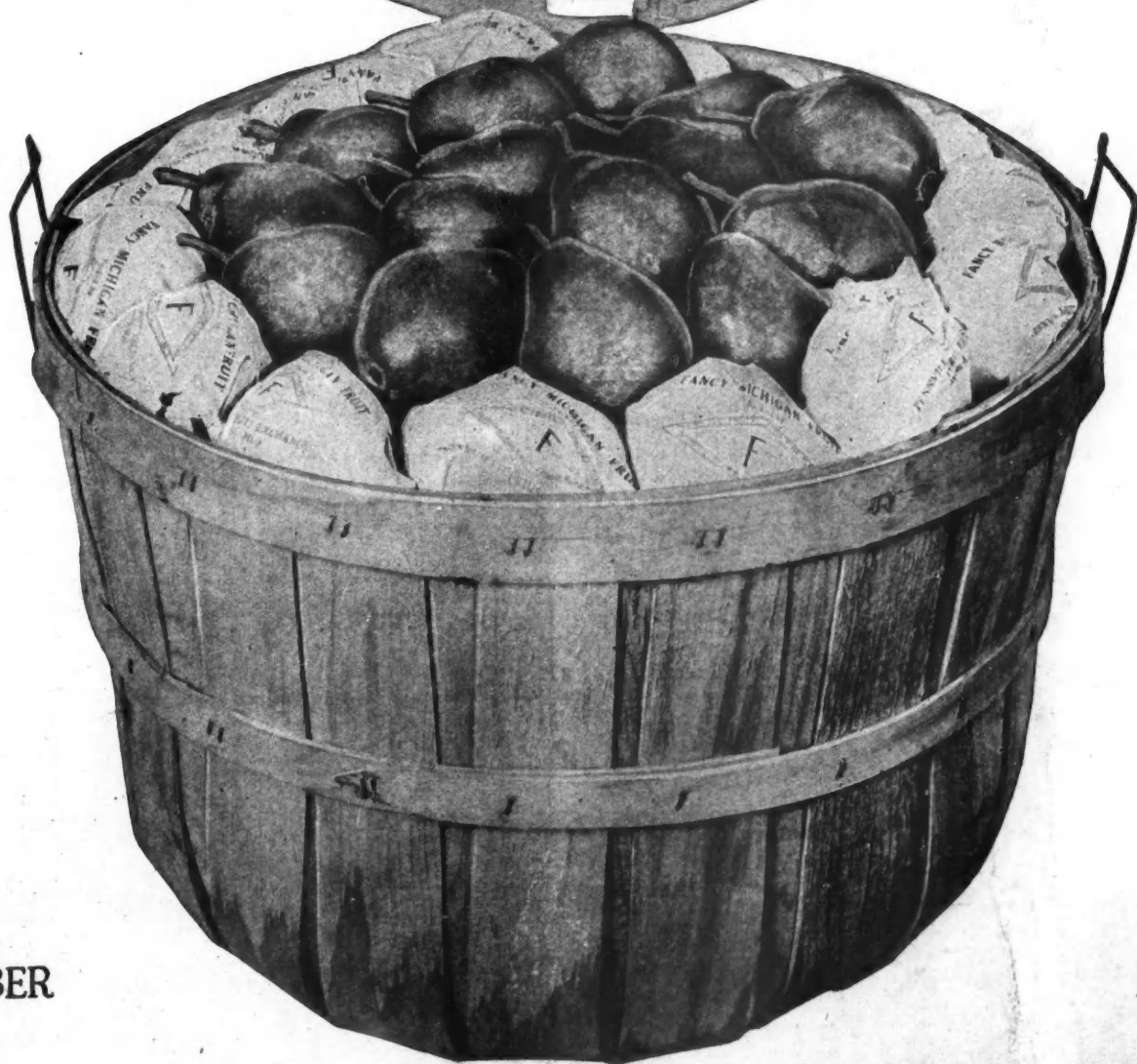


AMERICAN FRUIT GROWER

Vol. XL No. 11

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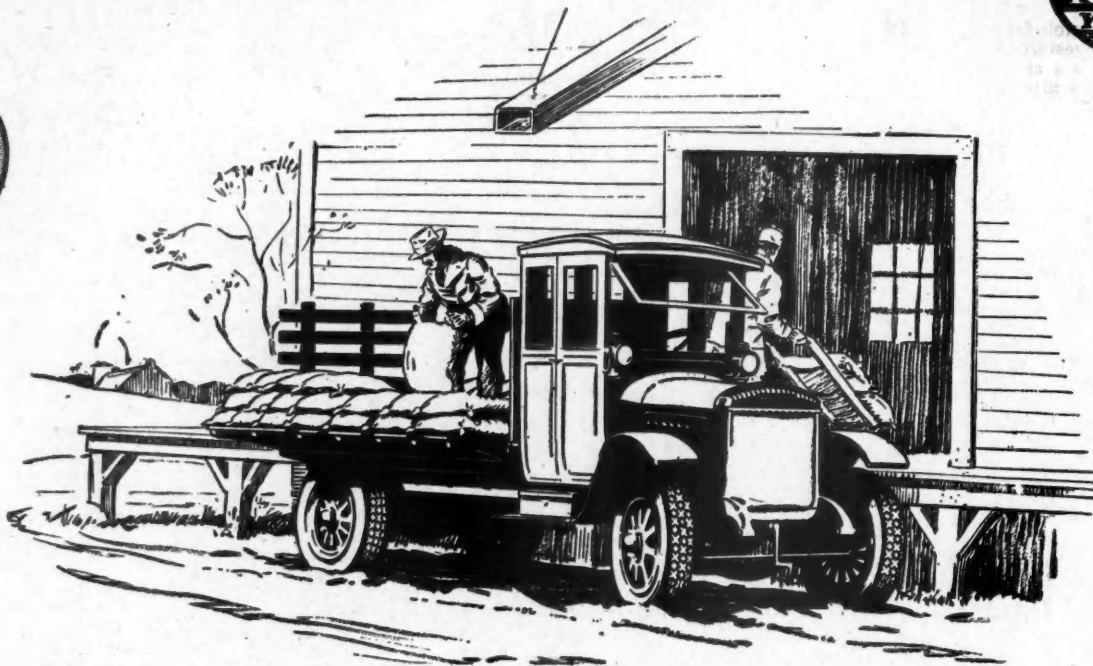
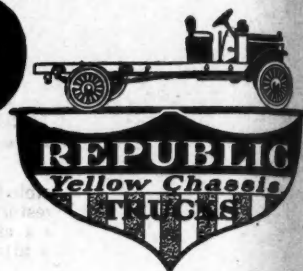


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Edited by Samuel Adams

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\$1.50 an Agate Line Flat, or \$21.00 per Inch
Classified, 15c a Word

AMERICAN FRUIT GROWER

(Title Registered in United States Patent Office.)
The National Fruit Journal of America
PUBLISHED MONTHLY BY
AMERICAN FRUIT GROWER COMPANY, Inc., State-Lake Bldg., Chicago, Ill.
Entered as second-class matter Oct. 17, 1917, at the Post Office at Chicago, Ill., under the Act of March 3, 1879

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Vol. XL

NOVEMBER, 1920

No. 11

Golden Delicious—A Surprising Apple

By E. H. FAVOR, Managing Editor

I DID not believe it was possible for an apple tree outside of the western irrigated sections to produce a crop of marketable apples 18 months after the tree was planted, except under abnormal conditions. But it is possible. Golden Delicious is doing it. Not only that, but grafts five years old have produced four successive crops of apples, each crop being all that would seem possible for the tree to bear.

But perhaps Golden Delicious is only keeping up with the fashions. We are living in an age when the man who believes a thing is impossible, lives to see it done, and even lives to see it become commonplace. One needs but look back just a few years to find ample testimony of the impossibility of ever being able to fly through the air, or of the impracticableness of the "horseless carriage," or of the unconquerable desert and undrainable swamp. Today the airplane has been commercialized to such an extent that freight, passengers and mail are transported through the air; motor vehicles have become necessities rather than luxuries; irrigation has been applied to the deserts until they have become fruitful, and vast areas of swamps are yearly producing magnificent harvests.

Indeed, so great have been the accomplishments of the recent generation of man that it almost seems a folly to even think anything is impossible. But I started out to tell about that wonderful apple, Golden Delicious, and how it is apparently doing the impossible among apples. I have seen it doing some of the things that are commonly considered as impossible, or freakish, such as bearing four successive crops on a graft but five years old. Seeing is believing, and perhaps there still remains so much of the "show me" instinct in me that, as a Missourian, I must be shown.

Golden Delicious apple, I should say, was introduced to apple planters by Stark Bros., Nurseries & Orchards Company, during the season of 1916-1917. That fact did not arouse my interest, for I have seen many apples introduced by various nursery firms. It was a yellow apple, and on that account, perhaps, it failed to create any unusual interest on my part, for a yellow apple never arouses my interest so much as does a red one.

But that was because I did not know the apple, except as it was described in cold print. While a printed description is good as far as it goes, there is no pen that can kindle one's enthusiasm so quickly as actually seeing the living thing and eating one's fill of the fruit. I have done that and am frank to say that, in my opinion, Golden Delicious is undoubtedly the most wonderful apple I have seen, and I believe it is certain to have a very pronounced effect on the commercial apple industry of the United States and other apple-producing countries.

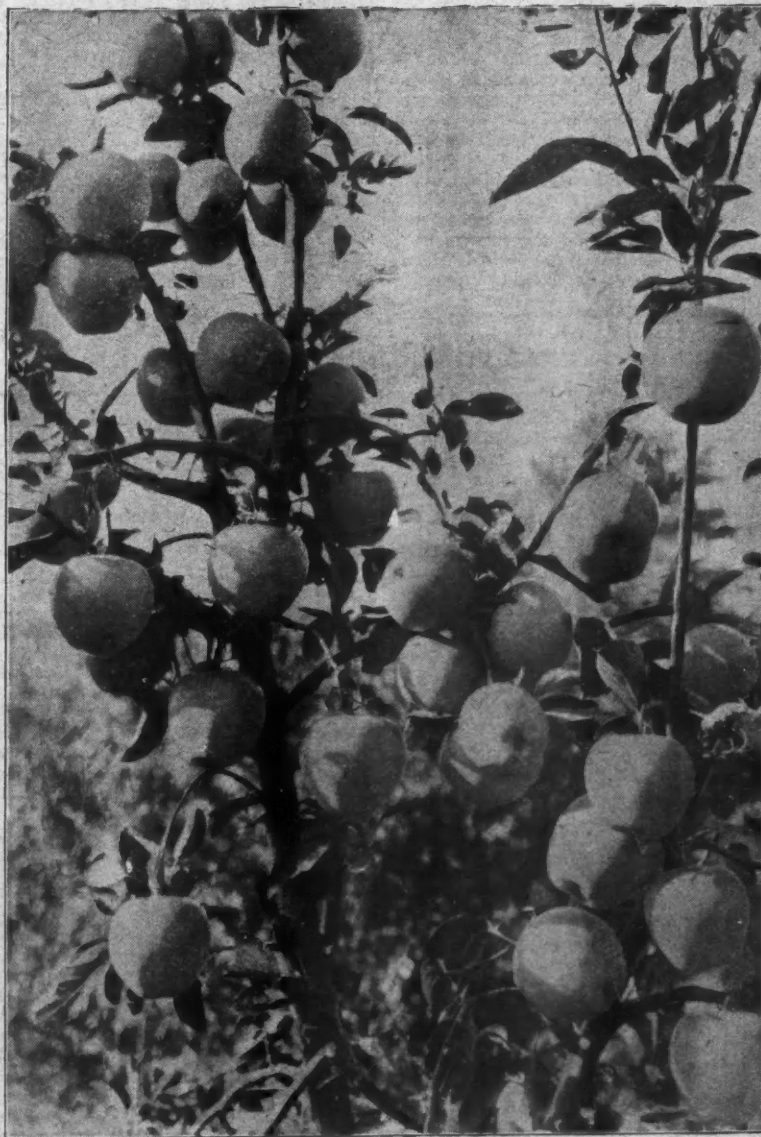
Early Bearing

That is the opinion I have formed, and I will tell you why. There are a number of reasons, only a few of which I can enumerate here, but these are its early bearing habit, its remarkable manner of producing fruit buds, its apparent resistance to fungous diseases, its long keeping quality, its hardiness, its heavy and regular production and the flavor and texture of the fruit.

Its early bearing is unusual. On several occasions Stark Brothers have invited me to journey to Louisiana and see this remarkable apple in bearing. It was only this fall, after receiving insistent invitations that I responded. In their office I was shown a pile of letters from custom-

mer. If the 16 apples in this package were representative of the crop, it was certainly "some" crop, for each apple was about 2½ inches in diameter.

Mr. Paul C. Stark showed me several photographs that had come from other customers showing crops of apples on



As the Five-Year-Old Graft Looked with Its Fourth Crop of Apples

ers who had bought some of the Golden Delicious trees, all of whom had glowing statements regarding the merits of the variety, and all of whom uniformly reported the variety as producing from a few apples to many apples in the second summer. In fact, while I was in the office a package containing 16 apples arrived from California. This was accompanied by a photograph and letter from the sender stating that the Golden Delicious tree from which these apples were taken produced 127 apples in its second sum-

mer. If the 16 apples in this package were representative of the crop, it was certainly "some" crop, for each apple was about 2½ inches in diameter. Mr. Paul C. Stark showed me several photographs that had come from other customers showing crops of apples on

could bear. This was repeated the next year and again this year.

Fruit from Lateral Buds

There is nothing so very remarkable about a top graft producing a few fruits in its early years, but it is very much out of the ordinary to find one producing so heavily. The reason for it apparently rests in the unusual manner in which the fruit buds are formed.

Normally, throughout most of the country, the apple produces its fruit on spurs that are at least two years old at the time. Golden Delicious does this, but in addition it forms fully half of its fruit from lateral buds on last year's growth. In addition a very considerable number of the terminal buds on the twigs had apples on them. In other words, Golden Delicious produces its fruit on lateral buds from last year's growth, from terminal buds and from spurs as in the case of other varieties. Can you beat it?

It is because of this distribution of the fruit on the tree that Golden Delicious is such a heavy bearer. In fact, I believe Golden Delicious is to apples just what the everbearing strawberry is to strawberries. The everbearing type of strawberry, you know, has the peculiar habit of producing fruit on its runners, even before the runner has taken root. Golden Delicious, by producing fruit on the lateral buds from last year's growth, comes into bearing early. And if it has no other claim to merit than that one fact, it would be worth a place in the field of pomology for breeding purposes.

But it has other claims to merit, as I have already indicated. Take the matter of freedom from fungous diseases as an instance. While I cannot speak of this from actual observation on my own part, both Mr. Paul Stark and Mr. Howell told me of their observations of the original Golden Delicious tree. This tree is growing in the seedling orchard of A. H. Mullins, on a steep mountain side in West Virginia. The orchard is composed of native seedlings, about a hundred trees in all. It has never had any care, never fertilized, never pruned, sprayed or given any modern care. Both Mr. Stark and Mr. Howell have seen this original tree on several occasions and at different times of the year.

No Fungous Diseases

It has been their observation that in the late summer, when all of the trees in the orchard have lost nearly all of their leaves from scab and other fungous diseases, Golden Delicious is just as verdant with luxuriant foliage as though it had been very carefully sprayed. Not a leaf on the graft I saw in the test orchard showed the least evidence of fungous disease, and it had been sprayed but once this season. Nor did the fruit show any evidence of fungous disease, and but little injury from insects, yet the tree was loaded with apples so heavily that there was abundant opportunity for worms and fungi to do much damage, as the one application of spray last spring was not made with as much thoroughness as could be desired.

In point of flavor, I have not had the opportunity of tasting Golden Delicious when it was at its best, which is not until midwinter. But it is good to eat now. It is simply delicious right now, and the apple would undoubtedly pass

muster with the fall trade if one desired to market it to the retail consumer at that time. I am told, however, that its goodness really does not begin to appear until after Christmas, and then it is wonderful. It is said to have a flavor surpassing that of yellow apples, Grimes Golden, with just enough snap of acid to make one want to eat and eat and eat.

I would like to go on and tell of the other striking features of this new apple, for the hardness of the tree, the regularity of production, keeping quality of the fruit, deserve mention. Most of these have been tested each year since the nursery obtained the apple, and each item has received as much praise as those I have mentioned. But I want you to read what others have to say about Golden Delicious. Mr. Stark told me that some of the prominent men in agricultural college and experiment station work had lately visited Louisiana to see the trees in bearing. I wrote to some of them for a statement that I could use in this article, and here is what Professor S. A. Beach, Chief in Horticul-

ture, Iowa Agricultural College, has to say:

"Golden Delicious will soon make a place for itself in many apple regions of the country as a desirable apple for the commercial orchard. The tree is vigorous, comes into bearing young, and is evidently a regular and abundant bearer. The fruit is attractive in appearance, of a good clear yellow color, often with a slight blush; season later than Grimes, making it a good variety to follow that favorite in the general markets. Quality very good for dessert or culinary use."

From Professor W. A. Ruth, Assistant Professor of Pomology, University of Illinois, I have this statement: "Stark's Golden Delicious has many excellent characteristics which make it an extremely promising variety. Top-grafts on a large tree at Louisiana, Mo., have borne several heavy crops and are bearing a very heavy crop this year. Most of the fruit buds on these grafts develop in the area of the leaves along the new growth (laterally). This occurred on both terminal and lateral

branches. This should develop into mature trees and go far to insure uniformly heavy blossoming and bearing. The tree is a very vigorous grower as shown by the young trees in the Stark nurseries at Marionville, Mo., and Farmington, Ark. The wood is strong; the top-grafts at Louisiana show no indications of splitting. The appearance and keeping quality of the fruit are excellent."

Expecting More

Mr. Stark let me read a long and interesting letter he had received from Professor Wendell Paddock, Horticulturist, Ohio State University. He refers to the tendency of such varieties as Rome Beauty and Jonathan in Colorado to produce fruit from lateral buds, and that this makes these varieties in that state more nearly annual bearers. He continues: "But I have thought for some years that if we could develop this tendency in our apples it would go a long way toward solving the question of

annual crops. For after all is said and done, why is the peach an annual bearer and the apple intermittent? One would suppose that the advantage would be in favor of the apple, so it may easily be that the method of bearing may be all important. Anyway, we know that the original Golden Delicious tree has produced annual crops, the young trees have come into bearing early and the grafts beat anything that I ever saw. I certainly would like to know just how the original tree is bearing its fruit."

"If this feature of bearing proves to be characteristic of the variety, I look for it to be the starting point of a new race of apples, for it should be possible to combine the bearing habit with other flavors and colors. I do not hesitate to endorse the Golden Delicious as very promising for such qualities as vigor, early bearing, productiveness; the fruit is attractive, of good size and shape, excellent in quality and a long keeper. But as you will note from the above, I am expecting much more and I scarcely think I will be disappointed."

Consumption of Pure Fruit Juices Increasing

By Roy E. Marshall, Michigan

AN EXTENSIVE study of the fruit juice situation among the wholesale and retail dealers of Chicago, including the drug stores, soda fountains, grocery stores and "coffee houses," shows that the demand for pure uncarbonated fruit juices is steadily increasing and that there is lessened demand for the artificially flavored and colored or synthetic fruit beverages.

More than 80 different brands and kinds of fruit juices and fruit flavored drinks, exclusively of syrups, were found in the various establishments I visited, but not more than 70 per cent of them are entirely made from fruits. With the exception of two citrus fruit flavored drinks, the artificially flavored products are selling very slowly, because as a buyer for a large grocery store says, "People have money now and will pay the higher prices for the pure fruit juices."

The demand for the several kinds of fruit beverages varies with the locality, the weather and the people. A manager of a large soda fountain in one of the big office buildings states that girls prefer soda water while men more frequently call for the fruit beverages. The past cool summer resulted in a slower sale of fruit juice drinks than was anticipated, but on hot days lemon and lime ades were more in demand than other drinks. Foreign people consume greater quantities of fruit juices than the natives according to a prominent grocer. Fancy grocery stores in the better residential districts have sold more fruit juices than have those supplying a general trade.

Plain vs. Carbonated Drinks

Two retail grocers and one druggist were of the opinion that carbonated, "sparkling" or "champagne flavored" fruit juices were in greater demand, but the wholesale distributors and most of the retail dealers stated that the public preferred the plain juices. "Manufacturers feel that they must add an additional charge for carbonating and then the plain juices will usually go farther because they are in a more concentrated form," according to one of the distributors. A soda fountain man with a large trade stated that among his customers two would ask for the plain drinks to one that asked for the carbonated kinds.

Popularity of Beverages

I was especially interested in learning something regarding the relative demand for the several kinds of beverages and found that the popularity varied among the different classes of trade. In general, grape, apple and loganberry juices sell in the order named, but one wholesale distributor stated that his sales of apple juices are the largest of the pure fruit juice drinks, and coffee houses re-

ported much larger sales of apple than grape juices and further stated that they had little demand for loganberry. Another entirely different statement was made by a representative of one of the large department stores who stated that its customers buy more loganberry than any other fruit juice. Loganberry juice is also outselling apple juice in the soda fountain trade. Regardless of the relative demand, distributors and retailers were unanimous in the opinion that there will be a steadily increasing demand for pure grape, apple and loganberry juices.

All of the apple juices I found in this investigation, which was made early in September, were in glass bottles, but the distributors reported their sales in various containers. One distributor, catering to a soda fountain and hotel trade, handles only pasteurized apple juice in gallon jugs, while another handling both bottled and bulk juices stated that most of their sales are of the bulk juices and that apple juice in glass sells slowly because the glass container adds too much to the cost of the product. On the other hand, a third distributor has discon-

Give Fruit Juices a Chance

Unfermented fruit juices are increasing in popularity as beverages. But because of the cheapness with which artificial "fruit" drinks can be manufactured and sold, the competition from such products lessens the demand for the pure fruit juice, until the consumer finds out how badly he is being fooled. Fruit growers and fruit product manufacturers should give heed to the possibilities of fruit juices and acquaint the consumer with a full knowledge of the food value and healthfulness of pure fruit juices before it is too late. We will be glad to hear from all readers who have had experience in the manufacture and marketing of fruit juices.

Grape Juice

Thirty different kinds of grape juice were noted in the establishments visited, three of which were probably artificially made. Grape juice was reported as not selling as well during the past summer as was anticipated because of the cool weather which prevailed in Chicago and vicinity; consequently many retail dealers have a larger stock on hand than is usually the case at this season. However, it is the general opinion that the demand for grape juice is annually increasing. It was surprising to learn that "coffee houses" are not selling as much grape juice as they sold in the days when they were known as saloons. They only report a few calls for it a week.

One grocer has had larger sales of a sparkling juice but most of them state that the plain is in greatest demand. The distributors claim that white grape juices sell very slowly and that laws in some states prevent their sale, thus limiting the demand.

Apple Juice

Apple juice is a seasonable product and sells best from the first of September to the first of June and during this period will outsell grape juice according to the wholesale distributors. During the fall and winter months many of the grocery stores and soft drink establishments carry it in bulk because it can be sold much cheaper and thus in larger quantities as any fruit juice displayed in large containers in a conspicuous place seems to have a psychological effect on the public and sells faster.

Continued handling apple juice in bulk because of the danger of getting "hard" before it can be retailed. That there is a good demand for apple juices in glass at the present time is evidenced by the fact that the last mentioned jobbing house distributed 10 carloads of bottled apple juice last year. Although a large amount of juice has been handled in bulk in the past, all of the wholesale and most of the retail dealers agree that the demand for apple juices in glass is increasing very rapidly.

Eighteen different brands of apple juice were found in the places visited, three of which were probably not pure fruit juices. Most of them were plain but clear juices and consumers prefer products of this type rather than the carbonated and cloudy appearing ones if sales are a criterion. Neither is there much demand for the boiled product, the use of which is limited, for the most part, to cooking purposes.

Distributors were of the opinion that the demand for apple juice will not only increase faster than that for grape juice but that apple juice will be handled in larger quantities in a few years than grape juice. Apple juice has not been advertised extensively and dealers are agreed that national advertising is necessary to create the proper demand for this product.

Loganberry Juice

As an example of the effect of advertising in stimulating trade, a prominent distributor stated that "loganberry juice is not now selling as

fast as it did two years ago when it was more extensively advertised." One wholesale firm and several of the retail dealers do not carry it now. In contrast to the statements of most of the dealers a buyer for a department store grocery says loganberry juice is the best seller of the pure fruit juices, while a national distributor states that they "sell more than 10 times as much grape juice as loganberry." Seven brands of the loganberry juice were found in the establishments visited, one of which was unquestionably an artificially flavored beverage.

Citrus Fruit Drinks

Several distributors told me that pure citrus fruit juices have a tendency to deteriorate before they can be put through the channels of trade to the consumer and for that reason were not popular. All of the pure orange drinks I found had been made by the dealers from fresh fruit. Four so-called orange beverages were seen in the retail establishments, but they are probably synthetic or artificially flavored products, and in one case the manufacturers state on the bottles "Contains no orange juice." The sale of this product, according to several firms, has not kept pace with the forceful advertising behind it, although in the words of one distributor supplying the soda fountain trade, "The extensive advertising and solicitation on the part of the manufacturer has caused many retailers to overstock this so-called orange drink."

It is very evident to me, after getting this first hand information, that prohibition has been a big factor in increasing the demand for the various kinds of fruit beverages, and that several manufacturers have attempted to satisfy the thirst of the public by placing artificially and cheaply made fruit flavored drinks upon the market. Some of these manufacturers have succeeded wonderfully well for periods of greater or less length, but the public sooner or later learns that it is being fooled by deceptive advertising and then the sales of the product rapidly decrease. The people are realizing the importance of drinking beverages with a food value and which are healthful as well as refreshing, and, furthermore, they are learning that the pure juices of fruits meet with these requirements.

We are just beginning to appreciate the unlimited possibilities open to the manufacturer of pure fruit juices and syrups. The trade possibilities for good products of standard composition put up under good brands are exceedingly large, provided the product is backed up by forceful advertising and a well worked out sales plan. We have had the fruit to make the juice for a long time but have had little demand for the juice; but now we have both, so let's produce the pure juices.

Berries in the Puget Sound Country

By Christine Emery, Washington

OUT IN THE Puyallup Valley, in the Puget Sound region of Washington, there is an enduring monument to the initiative and united strength of the farmers round about, for there is not merely the working out of a difficult problem, it is rather the positive, inspiring example whereby other farmers may come into the warming rays of the sunlight of prosperity.

Nature was kindly disposed when, with erosion and the glacial wash from the ever guarding mountains and the rich silt of the mountain rivers, she spent the ages in forming this fertile soil—a soil in which one may dig to unbelievable depths without finding the lower stratum.

The incoming white settlers made small plantings from the luxuriant wild berries, which flourished in great abundance, and further improved the established varieties through selection and cultivation until they were justified in increasing their acreage and putting their crop on the market in the nearby cities. This process continued for several years, with far from satisfactory financial results, for they were situated quite as other farmers have been from time immemorial. Long hours, diversified crops, unsatisfactory markets and rutty roads were the major part of their inheritance.

Now all is changed. The growers for the most part specialize on berries. They are no longer at the mercy of the price makers, nor must they search out an individual market. Neither is that market confined to the narrow compass of their own district, nor to a one crop season, for the plantings of strawberries, currants, gooseberries, red raspberries, loganberries, Himalaya and evergreen blackberries spread the cropping season over the entire summer and summer comes early and tarries lovingly in this sheltered little valley seven miles long and two miles wide.

Approximately 15 per cent of the total area, or about 3,000 acres of the rich, friable soil is under intensive cultivation, with the long rows of bush fruits stretching, smooth and level, as far as the eye can see. Small holdings are the rule with the larger number of tracts of less than one acre and from that onward up to 10 acres, but the owner of a 10-acre tract needs no other identification to mark him as a wealthy man. The stranger is instantly impressed with the general air of prosperity, neatness and cordial hospitality that pervades the place.

Tramping through the valley in the mild, sunny glow of late December, I had the deceptive feeling that in an hour or two at most I might walk to the very base of the ever guarding mountain—so clear was the atmosphere.

All about me were farmers busily making the most of "the dry spell," industriously pruning their berry canes and through the clear, calm air, columns

of brown, gray smoke arose from the burning brush piles—pungent incense upon the altar of prosperity. From field to field came the unhurried exchange of opinions, everywhere there was the air of cheery neighborliness.

"Yes, ma'am, there is folks here, plenty of them, who have bought places just this last year or two and paid for them and had all their living and a little something left over besides," insisted a sprightly patriarch with whom I had stopped to chat.

"Now me, I came out here seven years ago from the middle west. I have done well out here, as anybody can if they only have a little gumption. There's plenty of folks like me that can just thank their stars they're alive and prospering these days. Just look around here if you don't believe it. Paul's a great manager. Yes, you've got to hand it to Paul."

Everywhere throughout the valley I found this invariable reference to the mythical "Paul," and in my eagerness to behold this oft quoted and highly esteemed individual, I sought him at the cannery, where I blundered into the wrong entrance and stepped right into the center of activity in a more than ordinarily busy shipping room.

"Will you tell me how to get to the office?" I inquired of an upstanding, rosy-cheeked lad who still wore his khaki shirt and overseas cap.

"If you will follow this passage and turn to the left, you can't miss the office," and my bright-faced guide removed his cap with a gallant flourish.

In the office, another industrial beehive of busy workers, I found the master mind of this organization, Senator W. H. Paulhamus, affectionately known as "Paul" throughout the countryside, for it was he, who less than 17 years ago, in company with a few other "visionaries" saw the solution of their individual difficulties in the unity of productive enterprise.

During his continual service as president of the fruit growers' association he has given full toll of time, strength and highest endeavor that their united enterprise should succeed. Still a berry grower, still the unassuming friend and helpful neighbor, he has fully demonstrated his superlative capability for this important position.

Tirelessly devising new methods, new outlets, new benefits, until their carefully nurtured industry attracted new workers, new tillers of the soil, new and happy home-makers, until today there is an unrivalled working organization of 1,800 people who comprise its ever growing membership, and the little hamlet which less than 17 years ago saw the inception of this unconquerable idea, has continually expanded under the impulse of the mutual organized effort and has become one of the most prosperous small inland cities

of the great Northwest.

Far from courting self-adulation or personal aggrandizement, he disposes of Herculean tasks as he sits behind the long pine table in his bare, sunny office. None of the pomp and luxury of the pampered indoor man about him—he is the worker who toils, and he uses sturdy, workable tools, giving attentive ear to other workers, to stockholders, and to those who, like myself, are forever bringing their problems to his attention.

This is the more remarkable when you consider that the interests he represents in this co-operative organization will handle the compelling aggregate of a \$4,000,000 business for the year 1919. You can gasp when you are told that this is but the beginning of the work they are contemplating, in fact they've "just got to the point where they really can work."

Berry production is a lucrative business to the growers in the Puyallup Valley—organized as they are under superior directorship, otherwise the small growers, and this includes practically the entire membership, would suffer serious loss were they to depend upon nearby markets or unperfected shipping conditions. No small grower could harvest in two days sufficient berries to make one carload, granting that he would be so successful as to find a broker who could handle and ship that quantity with even a moderate degree of success. With the most approved modern shipping facilities at their command, the association has shipped as high as 23 carloads of red raspberries in one day to far distant eastern markets.

As a rule about 50 per cent of the berries are canned in a normal year. The past season was an unusual one in every respect, the yield being exceptionally heavy, even for this favored district, and about 75 per cent of the total crop was canned in the spotless kitchens of the two great local canneries as they came in fresh from the fields each day. More than 11,000 barrels of red raspberries were hurried into cold storage lest one atom of their wonderful flavor be lost,

before they could, later in the season, be worked into jellies, jams and soda fountain syrups.

Throughout the valley a highly developed strain of Cuthbert red raspberries predominate. These berries grow to an enormous size, sweetened by the long days of mild sunshine, tempered by the incoming sea breezes that seek repose in the valley, enveloped by the enshrouding mists and dews of the cool nights, there is blended in them an aroma and a perfect nectar that is not only at its superlative best when eaten fresh, but retains the full true flavor and stands up well under processing.

It is to better care

for these freshly harvested berries that the innumerable windings of the paved highways cross and re-cross the valley, for motor trucks from the canneries and shipping stations gather up the ripened fruit carefully at the end of each day's picking.

The grower does not know and he certainly does not have any cause for anxiety as to when or where his berries will be marketed. He is concerned mainly with the net returns, a fair price and a satisfying return for his investment and labor, and the past season's production has more than set his mind at rest.

Red raspberries lead the harvest at from 12 to 21 cents a pound, with an average yield of 500 crates of 16 pounds each, or about four tons per acre. Loganberries come next, with from 3½ to four tons per acre, on an eight to 12 cent market, while the two varieties of blackberries round out the season with about 650 crates, or 7½ tons per acre, and averaged about nine cents a pound throughout the harvest.

Aside from the production, marketing and canning there is yet another side of the many advantages that accrue to the growers as a direct result of this organization. Under the old system of farming, the farmer sold his products at wholesale and everything that he bought came out of his pocket to the tune of retail prices. In other words he paid the piper with heart sickening regularity. But when the association shed its fledgling clothes and entered the busy marts of trade seeking an outlet for their surplus they fulfilled but one part of their ultimate mission. Then they decided that the buying was equally as important a factor in their successful business life and straightway empowered a purchasing agent whose colossal task it is to keep them in supplies. During the past year they found it necessary to operate three grocery stores which are conducted solely on the "cash and carry" plan, and the volume of business from these seemingly small stores exceeded \$650,000.

In addition to handling the commodities of daily family needs, the association also supplies the fertilizer, berry crates, pickers, and even the money to finance the picking for the individual growers whenever the need may arise.

The canneries, located right in the midst of the fruit growing district, are another indication of the stability and the success of this venture for they have emerged from their proving chrysalis as full grown manufacturing plants, the

(Continued on page 23)



Senator W. H. Paulhamus, Affectionately Known as "Paul"



Checking in the Pickers from a Loganberry Farm

Some Phases of Pear Harvesting

By C. I. Lewis, Associate Editor

SOME fruits must be picked green. These include the banana, pineapple, lemon and the pear. A banana that is allowed to ripen on the tree is of poor quality and cannot be shipped. Pineapples, because of their high sugar content, tend to break down in a short time if allowed to mature on the plant. Lemons that ripen on the tree are dry and coarse, and are much more juicy and of better quality when picked green and ripened artificially. The pear, if allowed to ripen on the tree, will develop a beautiful color, but becomes rotten at the core, dry and granular, and is practically worthless.

Pears contain much tannin and starch, and relatively little acids and sugar. An overabundance of tannin in pears that are picked prematurely persists in giving them an astringent, pungent flavor. A green pear is practically packed full of starch. Cut a green pear in two and make a starch test, and you will find the fruit gives a very strong reaction.

As the fruit begins to ripen, the starch begins to disappear, first in spots about the vascular bundles. Later these spots will increase, forming a complete ring. Then as the pear ripens further, this ring enlarges chiefly inside the cambial ring. At least, only a mere trace of starch is left in the tissue surrounding the seeds, and in a very narrow ring around the outside next to the surface of the fruit.

Some varieties of pears if picked prematurely and immediately placed in storage become worthless. They will look good at the point of destination, but later will either turn soft at the core, remaining very hard on the outside, or vice versa, and in any case will be valueless. The sugar content of pears is low anyway. In the earlier pickings of Bartletts, running about six and one-half per cent, finally reaching about nine and a half per cent or even falling away. Bosc will often have less than six per cent sugar when picked and will rarely pass eight per cent sugar.

Fault of Early Picking

When picked too early and placed in storage prematurely, the tannin does not seem to disappear, the starch does not change into sugar and the result is a worthless proposition. The acid content of pears is extremely low, running from about one-third of one per cent, to one-half of one per cent, causing many people to believe that pears are very sweet, when, in reality, it is the lack of acid that gives the impression of sweetness.

The Oregon Agricultural College has already published two very interesting reports that go into the harvesting and storage of pears very thoroughly. These are bulletin No. 154 and bulletin No. 162. In the relatively near future, further reports are to be published. It is shown by their investigations that there is very little difference in the maturity of small pears on the tree, as compared with the big pears; that chemically, practically all pears on the tree have about the same advancement; that Bartletts, which are picked in the middle or latter part of the season, tend to keep longer in storage, and are of better quality than those picked early. The very early picked pears are decidedly inferior in size and quality.

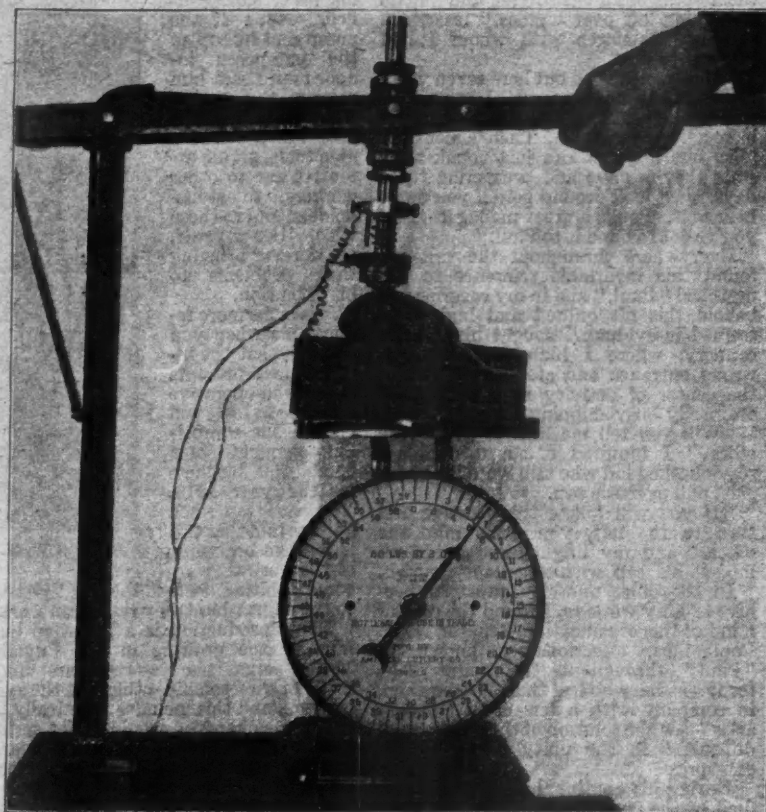
How to Tell When a Pear Is Ripe

The question that everyone would like to have answered is, how can we tell when a pear is ripe. All sorts of theories and rules have been advanced, such as pick the pear when, by a twist of the wrist, it snaps easily from the spur; or, when the seeds begin to get dark; or, when the grass-green or dark green turns into a light green; or, when the tissues around the vascular bundles begin to lighten in color. All of these may be of some value but, unfortunately, none of them are very accurate.

The question, however, has been apparently solved by the experts at Oregon Agricultural College by what you might call an "iron thumb." This is a simply contrived balance whereby the pressure that is required to dent a pear

can be measured in pounds. The photograph shown in this issue shows the very successful electric pressure tester which the experts at the college have evolved, but in lieu of this, one could take an ordinary ball and imbed it in some soft substance, like paraffin. This can be

hot weather seems to slow down the ripening of the fruit on the tree. That up to a certain temperature, the fruit will ripen very rapidly, but when exceedingly hot weather is experienced, ripening is really slower than would be true under a lower temperature.



This Is the Device That Indicates When Pears Are Ready to Pick

placed in paraffin while the paraffin is soft and, after hardening, will hold nicely in place.

It is found that a very green pear will require about 35 pounds of pressure to make a dent similar to the one shown in the picture of the dented Bartlett. As the season progresses it will take approximately half a pound less pressure per day, to make a similar dent in the pear, and by the time the pressure has dropped to approximately 25 pounds, the quality of the pear seems to be greatly improved, and conditions are right for good handling. This is especially true with the Bartlett.

The beauty of this contrivance is that anyone can use it in their orchard, and in a relatively short time can evolve proper pressure tests for picking each variety under their peculiar conditions. Before applying the pressure test it is well to pick off a specimen of fruit and allow it to stand for about six hours. The tissue is then in better condition for testing than if the fruit is pressed immediately after picking.

A very interesting point which has been brought to light by the experts of the experiment station, and also by those working in California, is that very



It Takes About 35-Pounds Pressure to Dent a Green Pear

Picking Dates

It is perhaps unwise to attempt to give arbitrary picking dates for pears. This is a problem which must be worked out according to elevation, exposure, soil, latitude, vigor of trees and variety. The pressure test, however, will work under all conditions, that is why it is so interesting and valuable. It is probably the best contribution to our harvesting knowledge that has been given in the last 25 years. However, a study of relative picking dates in the past in various parts of the United States will be of interest.

Southern Oregon

In the Rogue River District in southern Oregon the Bartlett season in 1917 extended from the 16th of August to the 20th of September. In 1918 from the 31st of July to the 20th of September, and in 1920, from the 6th of August to the 15th of September. The Howell generally follows about a week after the Bartlett, but the Howell season is relatively shorter than that of the Bartlett, the season extending in 1917 from the 24th of August to the 19th of September, and in 1920 from the 15th of August to the 23d of September. The Anjou from the 28th of August to

the 24th of September in 1917, and from about the 1st of September to nearly the 1st of October in 1920. The Bosc, from the 30th of August to the 28th of September in 1917, from the 22d of August to the 20th of September in 1918, and in 1920 not many were shipped before the 15th of September.

Yakima Valley

In the Yakima valley, which is one of the largest shipping points in the west, in some relative figures prepared for the Encyclopedia of Practical Horticulture by C. L. Hamilton, we find the following: For Bartletts in the Kennewick district, 2d of August to the 20th. In the Parker district, July 27th to August 31st. North Yakima, July 30th to August 12th. In the Grandview, Prosser and Zillah district, from the 25th of July to the 11th of August, and Selah-Naches district, August 10th to the 11th of September.

The Massachusetts District

Mr. Wilfrid Wheeler, a well-known pear grower in the Massachusetts district, gives some interesting notes concerning several varieties. He states that the picking season for the Seckel will run over a period of about a week, and the cold storage for this variety will extend from October 1st, to December 1st. That, under their conditions, the Bosc has a picking range of 10 days and a cold storage range of two to three months, although he states there is danger of carrying cold storage on Bosc too far, as it will not ripen when taken out.

Mr. Wheeler is having the same experience we have had here in the west, that perhaps if he picks his Bosc later and delays the storage at least two weeks before putting them on ice he will get better results. Unless Bosc are very mature they should not be placed in an iced car, or under refrigeration for a week to two weeks after they are harvested. He goes on to state that the Danaus Hovey, which more nearly represents the Winter Nelis type, can in Massachusetts be picked as late as October 10th, and has a storage range of four months. Under the Massachusetts conditions the Sheldon has the shortest season in storage of the pears, and it is generally not good over a month after harvest.

New Jersey

Prof. M. A. Blake, head of the horticultural work at New Brunswick, N. J., states that there are very few pears grown in New Jersey, other than the Kieffer. These are commonly picked in October, and some can be held in storage until midwinter, the length depending upon market conditions. The great bulk, however, are sold not later than January. With proper handling the Kieffer can be held as late as March.

Dr. W. T. Macoun, of the Dominion Experimental Farms of Ottawa, gives the following interesting harvesting dates for various varieties under their conditions: Anjou, November; Bartlett, early to mid September; Bosc, October; Boussock, September; Clairgeau, October; Clapp, August and September; Duchess, October and November; Kieffer, October to January; Lawrence, December; Louise (Bonne de Jersey), September; Seckel, September; Sheldon, October.

C. M. Bonham, Superintendent of the Grimsby Pre-cooling Experimental Fruit Storage Warehouse, states that pears handled under their storage investigations were free from all defects, such as worms and fungous diseases. The fruit was packed before it had begun to ripen, and while it was still quite hard. It was handled with a minimum amount of bruising and placed in storage immediately after picking. Tests were made under a temperature of 32° to 40°, the lower temperature giving the better results. Bartletts placed in storage after being handled in this way were held for six weeks at a temperature of 32° and after being taken from storage required eight to 10 days to ripen well.

Other varieties such as Duchess, Clairgeau, Anjou, and Howell, were stored under the same conditions for a

(Continued on page 27)

With Our Editors

Call a Halt

IT IS A human trait to crave something that will tickle the palate in the way of a drink. From time immemorial man has indulged in beverages for no other purpose than to satisfy his taste. Fruits have formed the basis of most of these pleasing beverages, and in drinking fruit juices his health has been benefited in addition to the satisfaction he has obtained. But fruits often have been expensive and difficult to obtain, and chemists have learned how to imitate fruit flavors with surprising exactness. This has made it easy for the beverage maker to compound from chemicals a product having the flavor of certain fruits.

Such products are cheap and easy to make, as compared to a beverage from the fruit itself. Consumers have accepted the concoction because of its name and the oft-times pleasing sweetness and flavor of it, assuming that a fruit juice was being drunk. Since the passage of the prohibition act which put John Barleycorn out of business, there has appeared a flood of alleged fruit drinks in every market, and the number is increasing. Such preparations only fool the consumer and libel the fruit grower.

But there is a limit to how far the deception can be carried. The American Fruit Grower has repeatedly called attention to the need for suppressing the fake fruit beverage. Calls have been made upon authorities at Washington who have the authority to act on behalf of the fruit grower; protests have been filed in the proper channels and the co-operation of growers and exchanges enlisted in the work. The results are beginning to appear. From Washington word is going out to the newspapers of the country warning the patrons of the soft drink counter against so-called orange beverages that now are being marketed. Many of these are compounded from sweetened water artificially colored and with no other right to the orange name than the fact they contain a little orange oil. The Department of Agriculture has ruled that the provisions of the pure food act will be held to have been violated in case such drinks are sold under trade names which lead the consumer to believe the drink contains the edible portion or juice of the fruit names on the label.

Your State Society

DURING the next two or three months the horticultural societies in many states will hold their annual meetings. We would urge our readers to attend these meetings and take an active part in the matters that are brought up for discussion. There is always an abundance of splendid addresses on vital matters relating to the production of fruit, at which the latest information is made available. But there are even larger things than those relating to production topics. There are problems relating to packing, selling, co-operative activity, farm loans, traffic problems and other affairs far removed from the production side of fruit growing. It is these problems that should have the earnest attention of the societies.

Not enough attention has been given to such problems in the past by state societies. In most cases their efforts have been ex-

pended along purely educational lines. But agricultural colleges have far surpassed the possibilities of state societies in purely educational work. The business side of fruit growing does not receive as much attention as it might have from state societies, and there lays the opportunity for genuine constructive effort. The interest of a state horticultural society is centered on one small branch of agriculture, and on that account is the logical source from which should emanate such propaganda as will have the largest constructive value to the fruit interests of the state. Again we would urge all readers of American Fruit Grower to join their state horticultural societies, attend the annual meeting and take an active part in it. If your state society is small and inactive, whose fault is it? If your state fails to appropriate sufficient funds to keep the society going, who is to blame? Some of the best state societies receive no state money.

The Amateur Fruit Grower

FRUIT growing is sometimes looked upon by those who have never tried it as an occupation that will quickly satisfy their longing to get out in the open and let them get rich quick. This opinion is not discouraged by land dealers here and there who have cheap land to sell at high prices and who are on the alert for easy victims. Not infrequently do we receive letters from city men and women who have good jobs, but who have tired of the hustle and bang of the city. They have been lured into believing that fruit growing will provide their heart's desire in the way of an occupation, and afford a comfortable living with little work. The land man said so, therefore it must be so.

City people who have a craving for farming, usually have had no experience except perhaps in a suburban back lot garden, or on their father's farm years ago. Their slender bank account is too frequently not more than enough to pay the cost of moving in these days of H. C. L. And when they are moved to the land of their dreams they have nothing left but a family with big appetites. Then begins the real struggle for existence.

Farming in print looks easy, but it is different at 102 in the shade, or two below in the sun. Then the dawn of knowledge begins to break and the farm loses some of its roseate hue, as the fact soaks home that it takes knowledge, money and brawn to grow fruit or milk cows. But the success that comes in the end is worth the struggle. We are ever ready to assist our readers in learning how to overcome the difficulties they meet with in growing their fruit, and to acquire the necessary knowledge that will enable them to succeed.

Farming and National Welfare

ONE of the strongest articles setting forth the importance of agriculture that has been published, has just been sent out by the American Farm Bureau Federation. The article covers in a broad way many of the vital problems affecting present-day agriculture and their relation to national welfare. A reading of it is enlightening, and shows the broad insight into national agricultural problems which the

Federation has obtained in its short existence. But the very fact that it is made up of farmers, enables it to speak the voice of farmers, which in its reference to farm labor says: "There is but one sure way to get men and women back on the farm, and that is to guarantee farming a return which will make it sufficiently attractive, not entirely in the matter of money, but in all those things that will make life worth living."

Again, in its reference to the financing of the farm, the Federation points out that an equilibrium must be established between farming and industry and that in negotiating loans the individual farmer is usually at a disadvantage. But "the farmer should ask for loans with which to finance his crops—not as a favor but as a right. The rural bank depends upon the farmer for its very existence. It operates on the money of the farmer. It cannot survive a single week without the farmer balances. The farmers of a community are entirely within their rights to demand that the rural banks provide ample capital to finance them throughout the federal reserve banks or other channels."

The American Farm Bureau Federation has tackled the biggest problems in agriculture that have been undertaken by any organization and should be supported by the membership in county farm bureaus of every farmer in the county.

Florida's Success

THE past season has been a highly successful one for the Florida Citrus Exchange, a co-operative organization which handles much of the citrus fruit produced in Florida. According to the annual report of C. E. Stewart, Jr., secretary and business manager, just made public, the business done by the exchange in the year just closed was the largest in its history. The highest average price f. o. b. Tampa for oranges ever realized by the exchange was recorded this season, being 28 cents above any previous year. Tangerines, too, touched a high record at 70 cents above any previous top price.

During the season the exchange handled a total of 3,770,511 boxes of fruit, which was 59.3 per cent more than in any other year and a volume of cash amounting to \$13,757,000. There are no bad accounts, and no fruit sold that was not collected for, which in itself is some record. We wonder how many independent fruit growers there are who can score 100 per cent in the collection of their accounts. The cost of doing business for the year amounted to .092c per box, which is a reduction of .013c over the average cost for last year.

The results of the work that is being done by the Florida Citrus Exchange in the successful marketing of the citrus fruits of Florida should not only stimulate membership in the exchange in Florida, but encourage co-operative associations in other states. Producing and selling fruit are distinctly different occupations. When fruit can be sold through such a co-operative association as the Florida Citrus Exchange, or any of the other good associations in other states, we doubt the advantage of a grower trying to sell his own fruit except where he is big enough to dominate his market.

Orchard Problems and Their Solution

Dormant Spray for Fruit Trees

I have a mixed orchard of 254 trees, plums, pears, apples, cherries and peach trees as fillers. Kindly let me know in your next issue if I can use lime-sulphur same strength as a dormant spray on all. Or do I have to mix separate solutions for the different fruits?—F. F. B., Illinois.

THE dormant spray, one part of commercial lime-sulphur mixed in eight gallons of water, will give the right proportion for the dormant application for all your fruit trees and you will not injure any of them. The variation in the strength of the solution comes in the summer time and this is due to the foliage of the peach and plum being more tender and more subject to spray injury than fruit like the apple or pear. If you are spraying for scale, and have considerable of it in your orchard, it will be a good idea to put on one application this fall after all the leaves drop and another one this spring before the leaves come out. This double application makes it surer that you will kill practically all the scale.

Orchards in Hilly Country

I live in Calhoun county, W. Va., which is about the center of state; rough, hilly country, but very rich ground; altitude, 1100 to 1200 feet. Would like to set out about 200 apple trees this fall as a start on a commercial orchard. What varieties are best suited to my locality?—J. H. M., West Virginia.

IHAVE made a number of trips through West Virginia and am familiar with the rough, hilly country referred to in your letter. This land is not very valuable except for orchards. Much of it is too steep to cultivate and you will probably have to follow some system of sod mulch, growing of clover or alfalfa or some similar crop between the orchard rows. This land planted to orchard can be made very valuable and will pay better than the finest of grain farms.

In planting an orchard in West Virginia, I would make my selection from the following varieties: Stayman Winesap, Grimes Golden (Double-Worked), Delicious, Winesap, Golden Delicious, Black Ben and York Imperial. There are other varieties that are successful in that section, but from the above list I believe you can pick out the sorts you will want to plant. In this connection, two of the above varieties, Grimes Golden and Golden Delicious, originated in West Virginia and both grow exceptionally well there. One of them, the Grimes Golden, will keep until Christmas, whereas the Golden Delicious is a late spring keeper.

Use a Cover Crop

I have a vineyard on a southeast slope. The top six or eight inches is black soil, underneath is clay, but not impervious clay. I have been cultivating up till the first of July, then keeping the weeds mowed. Would you recommend the above cultivation or mulching? We are usually subject to a dry spell just before or at ripening time.—J. W., Kansas.

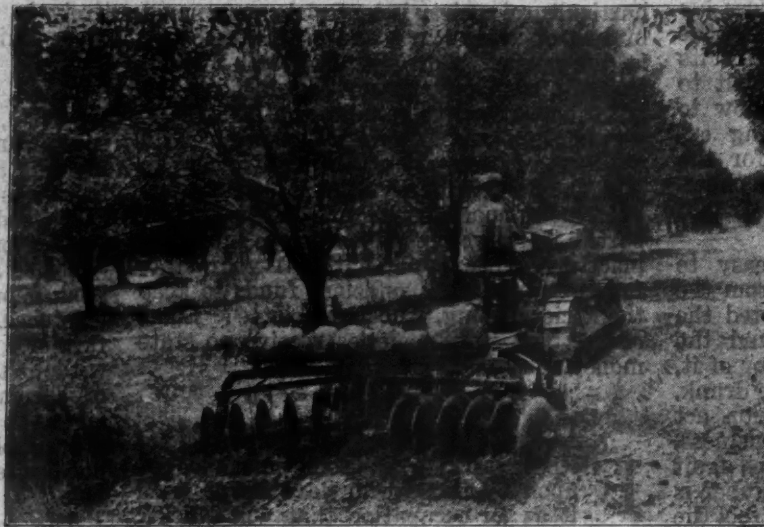
ASYSTEM of cultivation continued up to the middle or last of July is, in my opinion, the best. In my orchard this year I cultivated until August, then sowed rye and vetch as a cover crop and I now have a splendid stand of vegetation, and by the time I turn it under in the spring, I will have plenty of growth to furnish abundance of plant food and humus. You will find that intensive cultivation will keep the surface of your soil in a fine dust mulch that will conserve moisture. Break the crust after each rain.

An Orchard for Local Market

I contemplate purchasing a 23-acre farm eight miles north of St. Louis for commercial fruit and berry growing and poultry farming. There are some apples in this section, although not many due to San Jose scale. Peaches, cherries and pears are quite plentiful and seem to do well. I had thought of planting about 10 or 15 acres of fruit of all kinds and cultivate crops between the rows as long as they do not interfere with the orchard. As I would like for the picking season to extend over as long a period as possible, would

By Paul C. Stark, Associate Editor

Ask Questions. No matter how big or how little your orchard, you are continually meeting up with problems that you would like to get information or advice about. Let us help you solve your orchard problems, no matter what state you live in, what fruit you grow or the size of your planting. Address Paul C. Stark, AMERICAN FRUIT GROWER, Chicago, Ill.



A Disc Needs to be Weighted Down with Stones When Disking in a Cover Crop

appreciate it if you would advise me as to the best varieties for this locality. What time of year do you consider best for planting? The farm is situated on a good automobile road to St. Louis.—E. E., Missouri.

DON'T let the San Jose scale worry you. One spraying of lime-sulphur or scalecide applied while the trees are dormant is all that is necessary to control it, provided it is applied properly. Your section grows all the leading varieties of apples and we suggest the following varieties, named in their order of ripening: Yellow Transparent, Liveland Raspberry, Wilson Red June, Wealthy, Jonathan, Grimes Golden, Delicious, Stayman Winesap and Black Ben. The first three named are summer apples and by using this list you will have fruit throughout the season. We suggest 30 feet apart each way for your apple trees and that your peach trees be planted in the row with the apple trees. Then you will have more room for cultivated crops.

In peach, plant Red Bird Cling, Alton, Early Elberta, J. H. Hale, Elberta, Heath Cling and Krummel October. In cherry: Dyehouse, Montmorency and Suda Hardy. Pears: Lincoln, Anjou, Duchess and Keiffer. Plums: Red June, America, Abundance and Gold. Quince: Orange. Apricot: Superb. Grape: Moore Early, Concord, Diamond and Lutie. Early Harvest and Mersereau blackberry. Cumberland (black) and Cuthbert (red) raspberries. Strawberries: Senator Dunlap, Aroma and Gandy. Located as you are you should have a market for everything you could grow.

Planting Fillers in Nine-Year-Old Orchard

I have a block of nine-year-old York Imperial apples in which I have used Champion peach trees as a filler. This spring I removed the peach trees. Could I reset this in Elberta peach trees this coming spring, or do you think the apples would need the room? Apples are planted 30x30.—C. S. M., Pennsylvania.

YOUR apple trees should be large enough at this time to take up most of the space in the orchard. If it has been properly cared for and is growing in good, vigorous condition it should have quite a wide spread, and you must always remember that the roots of the apple trees go out approximately as far as the spread of the top. If you plant peach trees in this old orchard, the peach will be robbing the apple and apple

will be robbing the peach. Why can't you pick out another piece of land nearby to put your peaches on, so that you will be sure of their making good, strong growth and can be given more attention than if planted in this apple orchard?

I am a believer in the use of fillers in apple orchards no matter whether they are apple fillers or peach fillers, but it must be remembered that they must be cut out at the proper time—before they begin interfering, otherwise they will do more damage than the good you will get from the fillers. For the first 12 or 14 years there is plenty of room in the average orchard for fillers and, of course, the income is greatly increased for these early years when the orchard is in bearing as under the filler system you have twice the number of trees to bear fruit.

Transplanting Shade Trees

When is the best time of the year to transplant elm trees, and what size is best? Also, give me some information about trimming them. Can oak trees be transplanted?—B. J. K., Michigan.

YOU can transplant elm trees in either the fall or spring, as suits your convenience. In your country, we expect it would be better to wait until spring. But do not wait until too late. Get them in the ground early as you can. Trimming would depend on what kind of trees you plant. Just shape them nicely, heading back moderately, and let it go for the first year or two. That is my advice. Be careful in transplanting them, be sure the dirt is pounded firmly around the roots so as not to leave any air pockets. You can transplant oak and can buy the trees from any leading nursery. The oak is one of the finest American shade trees. There are several kinds, of course, that will grow in your section.

Apples for Indiana

Please give the best commercial apples for a 15-acre orchard in the state of Indiana. How many different kinds should I use? Farm ideally located for fruit, part hilly, good drainage. Where would you advise me to get the trees and when would be the best time to plant, spring or fall? How old should trees be? What can we do to protect the young trees from ground hogs and rabbits?—M. C. S., Indiana.

THE kind of apples you grow should be regulated by the market. If you are depending on a local market—would advise your planting considerable sum-

mer and fall apples together with early winter and late winter varieties. I would select from the following list—Yellow Transparent, Liveland Raspberry, Wealthy, Jonathan, Grimes, Delicious, Winesap, Stayman Winesap, Golden Delicious, Black Ben. Can't go wrong on the above varieties. I would suggest selecting a good, reliable nursery, no matter where it is located. What you want is a good, strong, vigorous tree—it does not matter at all where it is grown. I personally prefer the one-year apple tree and in my own planting I gave preference to one-year trees. You can protect your young trees by circling the trunks with galvanized hardware cloth up to a height of 15 or 18 inches. Some orchardists use a wooden protector, but I prefer the wire. There is also a spiral wire protector that has been used with success and quite extensively. Your trees can be planted either spring or fall, just as suits your convenience. In your section, however, I believe I would get them in the ground this fall, if possible. Fall planted trees start growing earlier and nearly always make a stronger growth than trees planted in the spring.

Don't Use Seedling Plants

I wish to plant one-half acre of black-cap raspberries. Would it be a safe thing to plant in wild plants dug this fall and transplanted? There are just plenty of the wild vines in the field now that bore fruit this year. If you think it would be a successful thing to do, when would you advise to transplant the vines? Of course, I would cultivate and give them all the care necessary, but I want to be sure I am right before making the risk.—D. W. B., West Virginia.

A ONE-HALF acre of raspberries would produce a lot of fruit and if properly cared for will prove very profitable. I have known a great many instances where an acre or so of raspberries produced an exceptionally fine profit per acre. In a commercial proposition, the picking and marketing is very important. For this reason, you ought to plant a standard variety that the fruit would be of the same quality and would ripen at the same time. Cumberland is one of the best, although there are other good kinds.

Berry vines are relatively inexpensive to buy and if you are going into it, I would certainly advise you to plant one or two varieties that could be handled in an up-to-date, commercial manner. Many years ago, the old settlers used to plant apple orchards by using seeds, but no one thinks now of going into the orchard business on a commercial scale without using known varieties of fruit, because in this way, all orchard operations, such as spraying, cultivation, picking, shipping, marketing, etc., are handled in a systematic manner. This would be impossible if you had an orchard of seedlings.

Apple Trees on Gravelly Soil

I am expecting to plant a small orchard of apple trees of about 100 trees and I have a piece of land that is gravelly. Would like to know if it would be safe or not to plant apple trees on such soil, or if some other trees or vines require such soil.—M. A. E., Conn.

YOU do not give enough information to enable me to judge about the soil. If there is considerable soil mixed in with the gravel or stone, you can probably grow apple trees successfully. Another crop that does exceptionally well in gravelly soil where there is sufficient soil to furnish plant food, is the grape. Over in the Chautauque grape belt of New York along Lake Erie, many of the fields look like they are nothing but gravel, but there is very rich soil mixed in with the gravel and as a result, the grape grows very vigorously and produces a fine quality of fruit. I assume that you have sufficient soil mixed in with the gravel, and if that is true, I would not hesitate to plant apple or other fruit trees as well as grapes. There is much soil of this kind throughout the country that is not suitable for farm crops but would produce a high quality of fruit and when the fruit trees are in bearing makes this so-called second grade land more valuable than the highest priced farming land.

Grower

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"The big Goodyear Cord Tires make a motor truck a real farm tool. I use mine to pull a hay cutter, or a rake, or an automatic loader, as well as to haul grain to the threshing machine and then to the barns for storage. The pneumatics roll through our peat bogs, 14 feet deep in places, which we use for fuel supply; teams can't go into them after rains, pneumatics can. I haul pure-bred Holstein stock to St. Paul, 80 miles, without appreciable shrinkage. Others take days to do the harvesting I do in hours—because of my truck on pneumatics."—E. H. Kuchenbecker, Owner, Oakcraft Grain and Dairy Farm, Owatonna, Minn., R. F. D. No. 1

THROUGHOUT agricultural America today there is many a farmer who can make a report similar to the one given above, regarding the all-round utility and value of a truck on Goodyear Cord Tires.

Just as the application of motor power quickens plowing, pumping, spraying, grinding and other farm operations, so does truck power aided by the active pneumatics quicken farm work in a large variety of ways.

All those tons of produce, stock and supplies that otherwise require such tedious toil in handling and hauling, are rapidly loaded and whisked between farm and town on the big, smooth-going Goodyear Cord Tires.

Farm products formerly limited to selling points only a few miles away, now have ready access by means of trucks on Goodyear Cord Tires, to markets sometimes 50 to 100 miles distant.

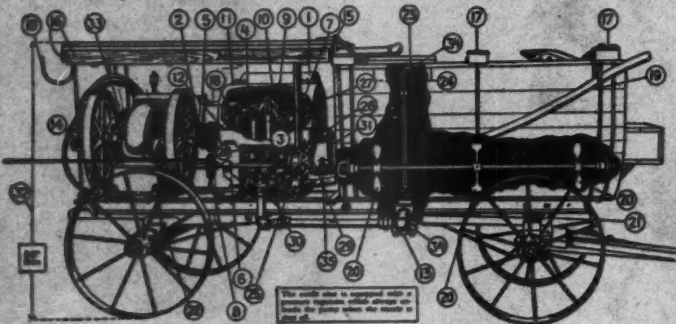
In the most strenuous of such duty these pneumatics demonstrate the rugged strength of their Goodyear Cord construction which makes possible that exceptional reliability with which they serve.

Farmers' reports of savings and advantages obtained with pneumatic-tired trucks and other motorized equipment, will be mailed on request by The Goodyear Tire & Rubber Company, from Akron, Ohio, or Los Angeles, California.

GOODYEAR

CORD TIRES

35 Reasons Why You Should Buy a Warlo Sprayer



1. Large steel air chamber located above valves assures an even pressure.
2. Patented Flexible Gear Drive makes certain uniform mesh of gears regardless of tortional strain on frame. Quickly changes to neutral or to filler pump drive.
3. Positive driven oil pump forces flow of oil to all working parts.
4. Distributing oil pipe.
5. Neutral lock for flexible gear.
6. Bracket to support filler pump shaft.
7. Oversize gear on crank shaft.
8. Drive gear for filler pump.



**Locked
in Neutral**

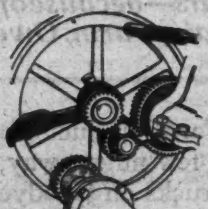
9. Extra heavy drop forged steel crank shaft, bearings; and pins, 1 1/4 inches diameter.
10. White metal bearings, die cast, easily replaced.
11. Dust proof steel hood protects all working parts.
12. Felt gasket to make perfect dust seal.
13. Drain for tank easily accessible.
14. Engine pulley can be used to saw wood, pump water or run churn by simply placing flexible gear in neutral.
15. Heavy cab hinges (allowing cab to swing).
16. Disappearing stringless curtains.
17. Clamp plates with heavy cross timbers hold tank rigid and prevent nuts from burying in wood.



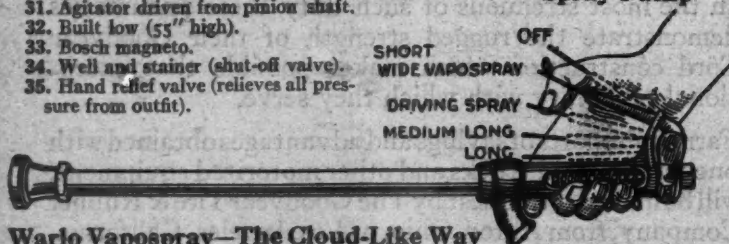
**To Drive
Filler Pump**

21. Rocking bolster (maintains level of tank and engine on uneven ground).
22. Steel plate support (for rear axle).
23. Tank strainer (prevents foreign substance from entering tank).
24. Spring equalizer (makes allowance for shrinkage or swelling of tank).
25. Rotary filler pump (assures fast filling of tank).
26. Cylinders cast in block with base, reduces number of working parts.
27. Drop forged connecting rods.
28. Removable brass bushings for plunger guide.
29. Deep oil pan assures oil reserve, and at the same time is part of main pump casting which increases rigidity.
30. Quickly removable valves and valve seats.
31. Agitator driven from pinion shaft.
32. Built low (53" high).
33. Bosch magneto.
34. Well and stainer (shut-off valve).
35. Hand relief valve (relieves all pressure from outfit).

18. Extra long bearings.
19. Adjustable hooks (swing either way to avoid limbs).
20. Positive three blade agitator (means perfect agitation of solution).



**To Drive
Spray Pump**



Warlo Vapospray—The Cloud-Like Way

This spray gun is always under complete control—one hand only being required for its operation. Equipped with automatic shut-off valve, allowing cleaning of the discs without shutting off line at the pump.

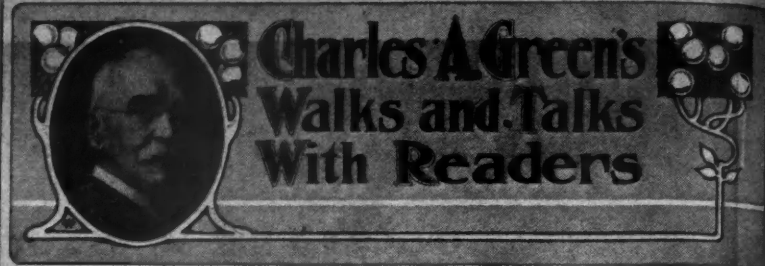
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How Varieties Differ

AS I GO THROUGH a field planted to apple trees in nursery rows I observe that every variety has distinguished peculiarities over other varieties. Some varieties, like the Baldwin and Spy, are upright growers with vigorous branches and the foliage is different from other varieties in color and size of leaf, so that it would be easy to pick out one or more trees if not truly labeled.

I find the McIntosh and Jonathan are more slender in growth than the Baldwin and Spy, and are not quite so vigorous. Therefore, in viewing the field of trees from a short distance or on close inspection I find a great variation of growth.

In nurseries, as well as in forests, varieties are distinguished by the shape and size, also contour of the leaves. The leaf of the White Oak differs from that of the Red Oak. In old times varieties of peaches were described largely by the leaf. Certain varieties had globular excrescences at the base of the leaf which were curved or straight, or large or small on different varieties. Other varieties did not have these globular excrescences but had what was called serrated leaves. Of late years we do not hear much about globular excrescences or serrated leaves in describing peach trees. The peach is more difficult to distinguish as regards varieties than other fruit trees.

Beginners Want to Know

A subscriber of the AMERICAN FRUIT GROWER writes me at length calling attention to what he deems to be the most important feature of a fruit grower's publication. He intimates that there are 100 readers who are small gardeners or fruit growers or who have fruit gardens while there may be but a small percentage who are commercial fruit growers or who are growing fruits on a large scale. He regrets that publishers do not cater more largely to the small fruit grower since he, by far, outnumbers the commercial orchardist.

In reply I will say that this writer seems to me to be correct in his statements and that he makes suggestions that may be of value to the publisher in increasing his subscription list.

Instead of being small fruit growers to one commercial orchardist I would say there probably are many hundred small fruit growers to one large one. There is always a crying demand for the A B C of fruit growing. I mean by this, that while the public may consider that commercial orcharding is the vital point to be treated it must be borne in mind that there is not so much to communicate regarding large planters as there is for the small planter who does not possess nearly so much information as the large orchardist possesses. It would be a difficult thing to publish a periodical designed to interest and instruct talented men connected with the experiment stations throughout the country, for growers who have large acres of fruits or large specialties, for these later fruit growers have other methods of information and have had long experience and have ample time and opportunity to travel about the country and secure just the kind of information that is needed.

New recruits are constantly being added to the fruit growers' legion. They are springing up in every locality and yet the field is not occupied. There are hundreds of thousands of villages poorly supplied or not supplied at all with home-grown fruits. The fact seems plain to many that a large portion of the information given should be suitable for these beginners who want to learn how to plant, what to plant and where to plant and how to market. Yet there are many

readers who take no interest but in reading of big orchardists and big yields which do not greatly interest the average fruit grower.

One reason for the great success of the AMERICAN FRUIT GROWER in past years has been the fact that its publishers and editors have catered largely to the A B C of fruit growing. Many will claim that there had been enough of the A B C and that now we should cater to the X Y Z of fruit growing but I consider this a mistake.

Overladen Fruit Trees

As I forced my way through my fruit hedge this morning admiring the beautiful tempting peaches and fast ripening pears I felt ashamed of myself in that I had not thinned out the surplus fruit which encumbered these trees. I have just returned from a month's vacation which is some excuse. I find that my gardener has placed props under the branches which are so heavily laden. This will support the branches but will not give the large and superior fruit that I should secure.

I noticed one thing in connection with these overladen trees that the average reader may not have observed. That is that branches that are not overladen with fruit are producing larger specimens while those overladen produce smaller specimens indicating that each branch is independent of other branches.

I have instructed my gardener to thin out the overladen branches of pears and peaches though at this writing these fruits are not yet fully matured. I am in the habit of doing this with my Bartlett and Seckel pears both of which can be picked a long time before fully matured and yet be fair eating. This practice is not so good as thinning out when they are very small but will answer the purpose.

Seckel Pears

Those who want a very sweet pear should plant the Seckel which is the sweetest of all. It is also of high quality and when well grown it is a beautiful variety. It is an enormous producer and needs thinning in order to secure good-sized fruit. I do not feel that I can advise planting it for commercial marketing but for home gardening you will always have a supply of pears if you have a few Seckel pears.

The Bartlett Pear

This is one of the older varieties that long has been popular for eating out of the hand or for canning. This is a great producer, bearing more often every year than many other varieties. It is a large and handsome pear, but some growers have considered it more liable to blight than others but that has not been my experience.

I do not treat blight as many do for if the blighted branches are cut off a foot below the point attacked and the saw is disinfected before passing it on to the next tree a blighted pear tree might live almost for a lifetime, continually bearing fruit. I recall the Bartlett pear tree growing near my farm office which blighted a little every year for 30 years and still retained its productiveness. Of all pears planted about the home or for commercial purposes more than half are planted to Bartlett, thus indicating its popularity.

The largest contract for canned goods ever made in north central Washington was made by a cannery at Oroville for 2,000 tons of tomatoes.



A Willing Servant For Winter Chores

The time has come for every one who lives in the country to measure the usefulness of mechanical power in terms of time and money saved plus better and more comfortable living.

No more efficient or useful utility has ever been designed to serve the man in the country than the Midwest Utilitor. It is the trusty servant of the farm and farm home because of the things it will do at a time when animal power is carried at a loss—in winter.

Especially at this time of the year the Utilitor comes into its own. With snow to be cleared, this sturdy utility equipped with even a make-shift plow will keep the paths open to barn, chicken houses, hog houses and around the house.

All winter long you can depend on your Utilitor to grind feed, shell corn, turn a grindstone, pump water, run a cream separator, washing machine or churn. Such belt work can be done either on an individual or a line shaft.

Now is fuel-gathering time. A Utilitor will "snake" big logs to your barnyard and there it will run your wood saw. In no time this little bundle of power will accumulate your fuel supply for the winter.

With the addition of a cart or one-horse wagon you can haul your saw to your neighbors and cut their wood—thus making the Utilitor pay its way.

Besides keeping you warm the Utilitor will help light your home. A Utilitor and a lighting set, designed for use with this machine, can be purchased from any Utilitor dealer for only a few dollars more than a lighting set alone.

If you would know more of what this machine can do, go to our dealer and let him show you. He will demonstrate its uses gladly.

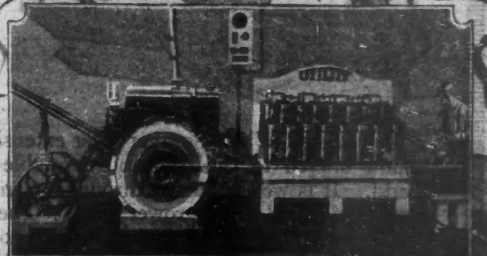
The Utilitor is useful 365 days a year.

DEALERS—You can make a Midwest Utilitor selling franchise a valuable addition to your present line. Write today for all the profitable facts.

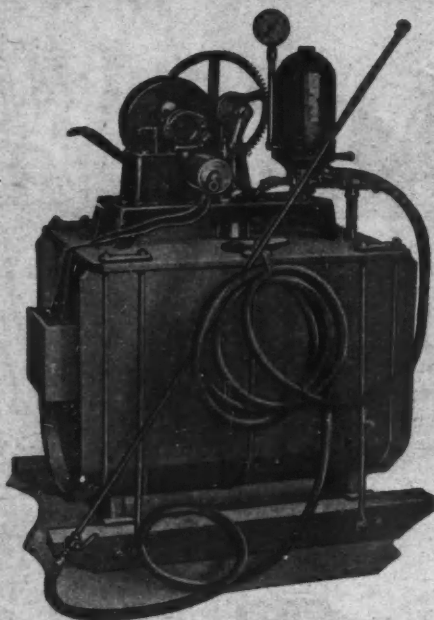
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2. Efficiency
3. Durability
4. Economy
5. Weight

A few facts about
Crestline Sprayers

The Midget Whale Sprayer after extensive and exhaustive tests is now offered to the fruit and vegetable growers throughout the world. It is well balanced throughout and meets the needs of the large and small fruit grower alike. The Midget Sprayer is so constructed that power is transmitted to the pump by cut gears which operate the pumps at 92 revolutions per minute. This machine is guaranteed to maintain 150 pound pressure. The engine is air cooled and equipped with automatic starter.

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Mr. V. S. Darling, Auburn, Maine, secured that result. Ten hours of ditch blasting added \$1000 to the value of his farm. Mr. Darling writes:

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Who Gets the Money?

"OUR study shows that farmers must vigorously fight any and every measure which would increase the expenses of production and the cost of living of farmers," says the Farmers' National Council. "It is true that the amount paid for seasonal and hired labor this year will not be as large as last year because farmers are discouraged with the low prices they have received for their products, and have not sown such large acreages. This is a dangerous situation, and if any financial burdens be placed upon farmers it will be a blow to our national efficiency and welfare because it is a blow to our basic industry—agriculture—which is now in a most serious condition as far as the general public is concerned. We have reached the stage in agriculture in this country where we must end special privilege and monopoly which are exacting such tremendous tribute from the American farmers."

Need Short-Time Credit

In commenting on a speech recently made by Governor Harding of the Federal Reserve Board, Mr. George P. Hampton, managing director of the National Farmers' Council, says "The farmers' end of the help from the Federal Reserve Bank system is evi-

dently not only the small end of the horn, but practically the disappearing end. Last year the total personal and chattel indebtedness of farmers was, in round figures, \$2,105,000,000, on which interest, commissions, bonuses, etc., averaged nearly 10 per cent. Such charges constitute a very heavy item in the cost of production of farm products, and they are unnecessary.

"Farmers have great difficulty in getting credit today on the best of security. There are nearly 20,500,000 depositors in national banks, and the total deposits in these banks on June 30th this year were \$15,008,000,000. Senator Owen's statement that Federal Reserve Bank members have loaned over \$500,000,000 at 15 to 30 per cent, nearly \$600,000,000 at 12 to 15 per cent, and over \$2,500,000,000 at 10 or 12 per cent, though challenged by the metropolitan press, has been confirmed by the Comptroller of the Currency.

"American farmers will not be able to continue producing bumper crops such as this year's unless they can get short-time credits on good security at reasonable rates, nor can consumers get farm products cheaply under the existing credit conditions. What is the government doing with the people's money?"

Committee of Seventeen Organizes

THE committee of 17 appointed by the American Farm Bureau Federation, and hereafter to be known as the Farmers' Marketing Committee of 17, held its first meeting on October 4th and 5th at Chicago and effected a permanent organization. All members were present except Dr. H. J. Waters, whose business connections make it impossible for him to serve. Mr. Don Livingston, director of markets for the state of South Dakota was appointed to fill the vacancy.

On request President Howard of the American Farm Bureau Federation appointed the chairman and vice-chairman, naming C. H. Gustafson of Lincoln, Nebr., chairman, and A. L. Middleton of Eagle Grove, Ia., vice-chairman. Later Wm. G. Eckhardt of Chicago, Ill., was elected treasurer and O. M. Kile of Washington, D. C., and C. E. Gunnels of Chicago, secretary and assistant secretary respectively.

The outstanding features of the meeting was the unanimity with which all agreed that each must sink his own individual, pet ideas as to what marketing plan is to be adopted, and search for the basic facts upon which a sound and comprehensive co-operative marketing system may be based. All appreciated that the committee has a tremendous job on hand—the biggest job any farmers' committee ever before confronted, yet the feeling was unanimous that a safe, sane, sound and satisfactory solution would be found and put into operation.

The work of the committee will be subdivided, with special assignments to small groups of committeemen for investigation and reports on such topics as co-operative marketing methods, cost of marketing, storage and transportation, consumption and export, and finance. The work of the group that will investigate co-operative marketing methods will be subdivided into four smaller groups, each group to study and report at the next meeting upon the co-operative methods followed in special sections of the United States or in connection with particular commodities.

The Farmers' Marketing Committee will hold a second meeting in Chicago, November 4th to 6th, at which time men of national reputation and prominent in marketing affairs will be invited to appear before the committee to discuss both general and specific features of the entire marketing prob-

lem and to answer such questions as the committee may ask.

Among those to be invited are the Secretary of Agriculture, Mr. E. T. Meredith; Victor Murdock, chairman of the Federal Trade Commission; Mr. Julius Barnes, Mr. Herbert Hoover, Mr. Barney M. Baruch, Mr. L. F. Gates, president of the Chicago Board of Trade; Mr. Harold G. Powell, manager California Fruit Growers' Exchange; members of the Farm Bureau Committee who visited the California co-operators; National Millers' Federation; representatives of the Canadian Council of Agriculture.

It was decided to employ competent economists to investigate and report on certain features of the marketing problem. Much data must be collected in addition to the reports to be made on the methods and plans of the different co-operative marketing organizations to be investigated. Progress reports are to be made at the November meeting.

Grange Disapproves Bill

"Evidence accumulates that government funds are being used in the effort to popularize the propaganda for the enactment of the modified Lane Soldier Settlement bill in the coming congress," says the National Grange. "This bill, which is still alive in one form or another in both House and Senate, although all progress was blocked by the efforts of farm representatives, is a dangerous raid on the treasury in the interest of job hunters and land speculators. The Grange has no general opposition to definite projects for reclamation, but asks that such a blanket raid as proposed in the Lane scheme, be blocked and killed. Farmers should not let any congressman return to Washington without making plain to him that the Lane scheme is to be killed, if he values his reputation for government economy and sensible legislation."

Federal rulings regarding the manufacture of cider has caused some manufacturers to suspend, and some jelly factories in the west have reduced their operations because of the high cost of sugar.

As early as 1686 there was one apple orchard of 2,500 trees in Virginia, most of which had been grafted.



The Complete Dormant Spray

— makes better quality fruit

IN almost every fruit section there are a few fruit-growers who produce better fruit and get a better price for it than their neighbors, and who also take the prizes at the fairs and fruit shows. Many of these skillful orchardists long ago selected Scalecide for their dormant

spray—for Scalecide not only controls the orchard pests that are controlled by other dormant sprays but does many things that no other spray or combination of sprays can do. *Scalecide*—“the complete dormant spray”—makes it easier to produce prize-winning fruit,

Prize-Winning Fruit Is Grown Only on Healthy and Vigorous Trees

During the seventeen years that Scalecide has been on the market, fruit-growers over the United States have observed results which originally we had neither claimed nor anticipated. Scalecide is becoming known even more for its invigorating effect on trees and its effectiveness in controlling other orchard troubles than for killing scale. It makes healthy, vigorous trees.

It has stimulating and invigorating properties as well as being a contact insecticide. It literally “makes a tree outgrow its troubles.” The invigorating effect of Scalecide is noted in increased terminal growth; larger, darker foliage on bearing trees; and the holding of the foliage later in the Fall, thus

accumulating starch and sugar which results in a plumper fruit spur and insures a larger crop the following year. A 2% increase pays the entire spraying cost.

Scalecide kills insects, eggs and larvae of insects, and diseases that winter on the trunk or branches of the tree. It kills the hold-over cankers which cause fire blight, makes the old diseased bark peel off, and allows a new cambium to form. It kills the adults and controls Pear Psylla when applied in the Fall or on warm days in the Winter. (It is too late after their eggs are laid in the Spring.) It kills aphids, too, when used as a delayed dormant spray in the Spring, just before the buds show green. It’s “the complete dormant spray.”

Scalecide Requires Less Labor

One barrel of Scalecide, which makes 800 gallons of spray, will cover, until they drip, as many trees as three and a half barrels of lime-sulfur, which make 1600 gallons of spray. And of course you can apply 800 gallons of Scalecide with much less labor than 1600 gallons of lime-sulfur. You can’t ignore this.

Scalecide Is Pleasant To Use

Scalecide is soothing, healing and antiseptic to skin of man or beast, whereas lime-sulfur is caustic and disagreeable. Scalecide does not injure even the eyes. It does not corrode the spray pump nor clog the nozzles, and being an oil, it makes the pump run easier and last longer. *It is surely a pleasure to use it!*

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Every claim we make for Scalecide has been proved in our own large orchards, which now total 26,000 trees, and verified by growers throughout the U. S. We are able to speak to you from 10 years’ experience as fruit-growers, and our recommendations are based on what we know to be profitable orchard practice.

Avoid Disappointment—Order Scalecide Now

You can’t afford to take the chance of not getting Scalecide this year. Though we have doubled our factory capacity, we still anticipate diffi-

culty in supplying the heavy demand. Order early. If there is a dealer in your section, ask him to reserve enough Scalecide for you. If

there is no agent near you, write for our booklet, prices and guarantee, and give us the name of your dealer. Use the coupon. Address Dep’t 11.

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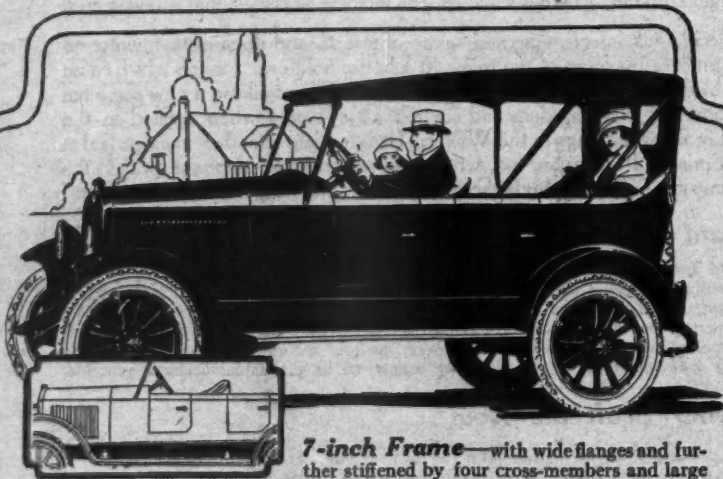
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(147)

Tractors Trucks and Engines



This department is for the discussion of transportation and traction matters. Inquiries are invited from all who are interested in the selection of, operation or management of motor trucks, tractors or automobiles. Address, Frank E. Goodwin, Care AMERICAN FRUIT GROWER, State-Lake Bldg., Chicago, Ill.

Truck Economy Important

By Frank E. Goodwin, Missouri

WHAT appeals to the user of a motor truck is the number of round trips the truck will make within a working day, and the cost per mile for such trips. His first consideration is the elimination of distance and time. The make of motor, design of the clutch, diameter of the pistons, and name of the radiator are secondary matters with the buyer, especially if it is his first venture in owning a truck. So the first question to which the purchaser of a truck should demand an answer from his dealer is the number of miles it will make per hour under normal loads, and second, what the cost of fuel and lubricating oil per mile will be.

If the truck is one of dependable make, which has been on the market long enough to have been thoroughly tried out, these factors should be known. Every manufacturer is vitally interested in the economy of his product, and if the truck has lived true to the claims made for it, he will have facts and figures to substantiate what his truck has done in the hands of a hundred or two actual users in the same line of endeavor as that of the prospective purchaser.

Here is a good example of a test for economy which might well serve as a demonstration of what a motor truck can and will do, under normal conditions:

Hans Georgeson, a farmer in North Dakota, was in the market for a truck. He had certain ideas as to what a truck ought to do, and the dealers at Grand Forks were willing to show what their truck would accomplish. Mr. Georgeson's farm is 5½ miles from town, and he had a crop of rye to move.

The truck was put to work, and was demonstrated for a working day in that section—11 hours. Fourteen round trips were made. In those 14 round trips 44,340 pounds were carried from farm to town, the truck returning "light." Each trip delivered practically one and one-half tons, not including the driver and two persons who loaded the truck at the farm and unloaded it at Niagara. The total distance covered was 147 miles in 11 hours' work.

During the demonstration the truck averaged 15 4-10 miles to the gallon of gasoline, the fuel consumption being 9¼ gallons. The price of gasoline was not stated, but if it was 30 cents per gallon, the cost of fuel would have averaged one-half cent per mile. Readers might do some figuring, if they wish, as to what it would cost to haul 22.2 tons of rye 5½ miles with horses.

Better Roads Needed

The use of motor trucks in agricultural sections recently received splendid endorsement when Governor Sleeper, of Michigan, in advocating extensive highway improvements, declared that only for the use of motor trucks much of the crops of Michigan

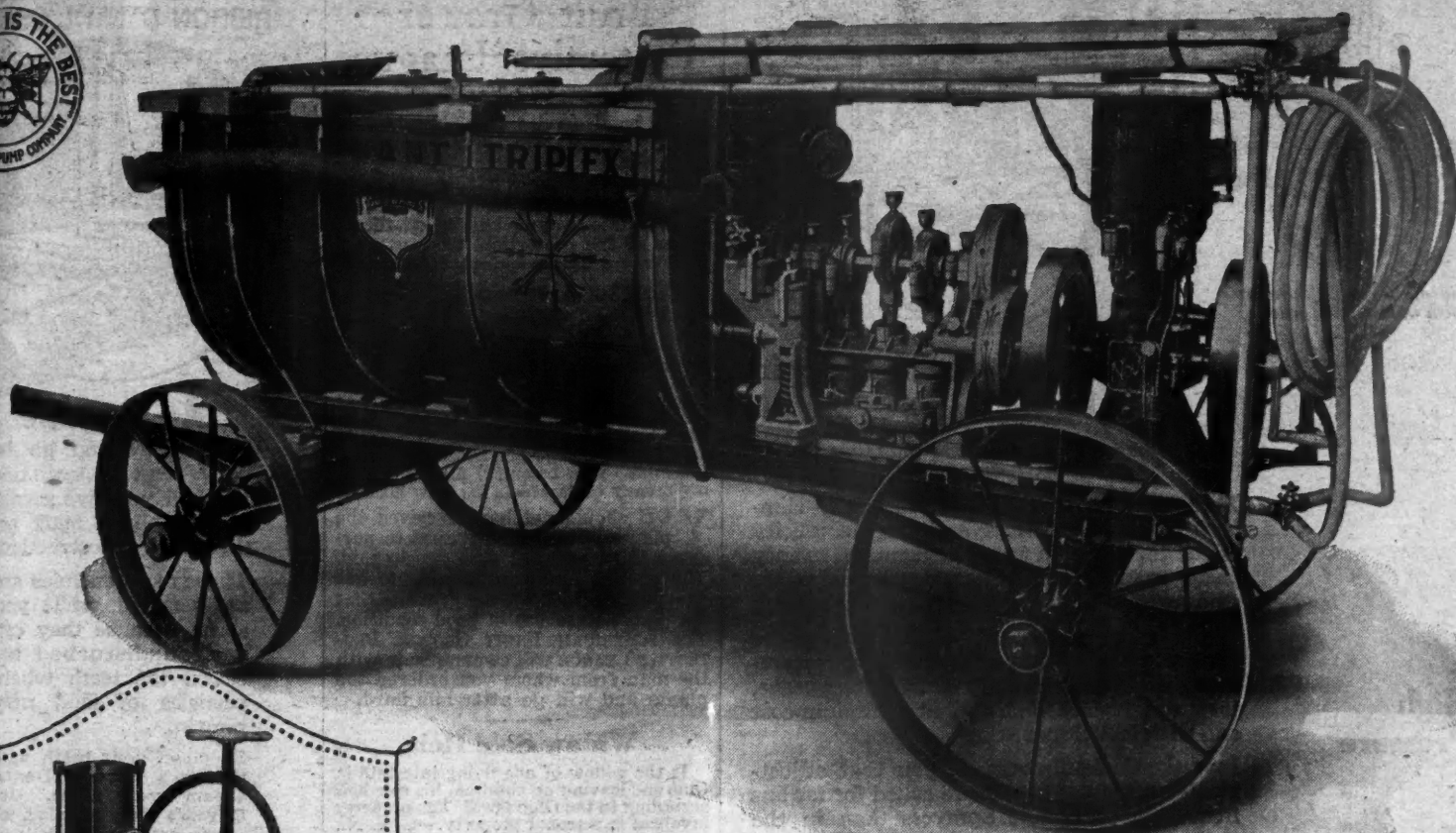
would have rotted in the fields. Governor Sleeper produced data which showed that the farm production of Michigan had been greater than in any year in the state's history, and that the crops had been promptly moved to market through the use of trucks, when the railroads had failed miserably in providing transportation facilities. He urged greater united activities in road building, by which the use of motor trucks would be increased materially, and declared that trucks would become an increasingly important factor in relieving rail congestion during the next year. Already one-tenth of the state's total road mileage has been improved, and the present program contemplates the expenditure of \$5,000,000 yearly for the next nine years.

Truck Industry Growing

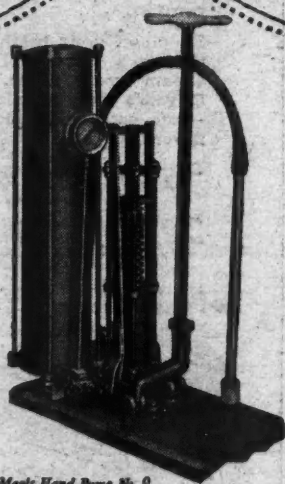
The writer doubts if one reader of THE AMERICAN FRUIT GROWER in 1900 fully understands the importance of the motor truck industry. So unassuming has been the growth of motor truck building that few realize that it has become one of the nation's great industries. There were, on September 1st, 1900 firms engaged in the building of motor trucks, and 606 models are on the market. As there are 130 manufacturers of pleasure cars, and about 475 models listed, the building of trucks has rapidly become a leading factor in the automotive field. Some of the trucks now named in the truck directories will be found missing 12 months from now, and others will come into the field. But there are a sufficient number of manufacturers who have been long established to make it possible for the prospective buyer to select a dependable truck which will not be an "orphan" within the next year or two. Truck building is following in the footsteps left behind by the makers of pleasure cars and farm tractors. The survival of the fittest is as certain in this respect as it has been in the two other industries mentioned.

Keep Off of Car Tracks

If users of motor trucks whose markets are in the cities would conserve the life of their tires, they should shun driving in street car tracks. The temptation to glide along on the smooth rails to avoid bad pavements, rough crossings and "shell holes" is almost irresistible to even the most conscientious driver, and yet nothing will so quickly ruin tires as driving in the tracks. Where the tires come in contact with the flanges of the rails, the casings are rapidly worn down, and unless the tires are frequently changed the wear becomes unequal on the sides. Contact with the frogs and switches causes bruises to the fabric, and long before the life of the tires is exhausted blow-outs are experienced. It is better to undergo the discomforts of poor streets rather than to seek easier driving in the tracks, if conservation of tires is desired.



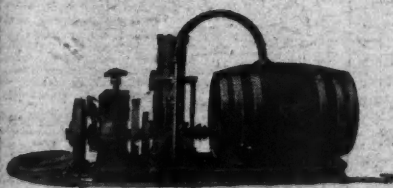
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The Bean Pressure Regulator holds the pressure exactly where you want it, and makes possible the removal of any valve in two minutes with full pressure in the air chamber and without stopping the engine. No time lost here.

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There are many other vitally important Bean features illustrated and described in the new Bean catalog which tells you all about the Bean line of Hand and Power sprays, Spray Rods, Spray Guns, Spray Hose, and other accessories. Send the Coupon.

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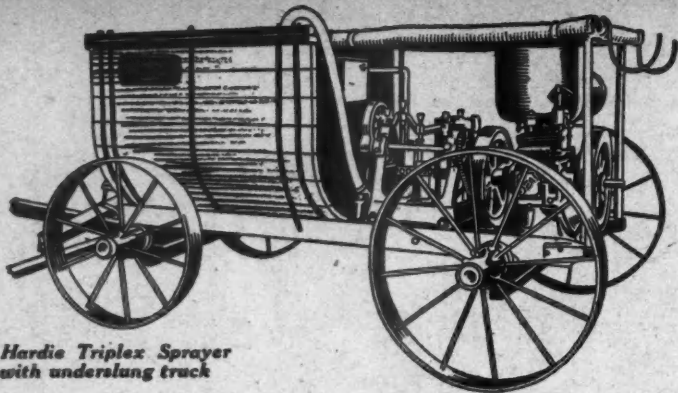
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Name _____
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These sprayer troubles are practically eliminated in the Hardie Sprayer through simplicity of design, based on the refinements of twenty years manufacturing experience and close study of the practical operation of spraying.

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Hardie Sprayers are sold wherever good fruit is grown. See the Hardie dealer or write us direct.

All indications point to a big demand for Hardie Sprayers this coming season, so we urge you to place your order early, then you will be sure of prompt delivery.

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Economical Operation

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American Fruit Grower Protective League

By Newton Jenkins, Illinois

The legal service furnished in this column to members of the American Fruit Grower Protective League is designed to help fruit growers in their legal matters. Our readers are urged to join this league and avail themselves of the protection it offers.

Plants Arrived in Bad Shape

I received a printed price list of a certain concern giving prices on sweet potato slips. The prices were specified as parcel post prepaid. I ordered \$14.25 worth. The slips came but were in a very bad condition and there was an expressage charge of \$2.75. I returned the slips. Can I compel him to return my money by law?—L. D., New Mexico.

YOU should not have received the plants at all. You agreed to purchase them with all charges prepaid. You should, however, be able to get your money back on the grounds that the plants were not in good condition. The AMERICAN FRUIT GROWER PROTECTIVE LEAGUE will communicate with the man from whom you ordered the plants and will go after him hard.

Widow Sole Heir

Is the widow of one dying intestate in Ohio and leaving no children, his sole heir according to the Ohio laws? The property involved is personal property.—G. S. N., Pennsylvania.

PERSONAL property descends in Ohio, in the absence of a will, as follows: First, to the children of the intestate and their legal representatives; second, to the husband or wife relict of such intestate, etc. In the absence of children, therefore, the property would descend to the widow.

Got Poor Trees

In the year 1917 I ordered 175 fruit trees of the Sheerins wholesale nursery of Danville, N. Y., and they held my order and the cash (check) I sent them in full until June 1, 1920, when they sent me the apple trees but failed to strip the 50 peach trees. The apple trees were very dormant and are yet. I don't consider them worth anything. As you are aware a tree received here in Southern Indiana after May 1st is not worth much. I paid the Sheerin Wholesale Nursery the cash in full for the trees. I wrote two letters to them asking for the return of the money and could not get it. I am seeking assistance from the AMERICAN FRUIT GROWERS' PROTECTIVE LEAGUE to see who these fellows are that can do this kind of business.—N. B. S., Indiana.

YOU should have refused to accept the shipment of trees when received and demanded the return of your money. This will affect your claim upon the nursery company. Your case is being taken up with the said nursery, however, and a demand made for your money.

Whose Profit?

My father passed away in 1919 leaving an estate of 200 acres of land. The land was sold for \$28,500. Before any settlement was made the purchaser sold the land for \$50,000.00. Have we no recourse?—A. L., Nebraska.

YOU might have contested the approval of the sale by the Probate Court. If, however, the land was sold under proper authority from the court and the purchaser was able to sell the land at a profit, you could not then set aside the sale. The amount involved is of sufficient importance to warrant you retaining competent local counsel to determine just what your rights are.

Too Little Land

I bought a house and some land from the East Peoria Land and Development Co., and after having the land surveyed I found that it did not have the amount of land contracted for. I went to them about it and they promised to make it good. That was months ago. Will you kindly help me out?—J. R., East Peoria, Ill.

THE matter is being taken up with the said company to determine what settlement can be effected.

American Fruit Grower

COLGATE'S RIBBON DENTAL CREAM



At Bedtime

WHEN you go to bed with teeth unbrushed, you give germs an eight-hour start on their work of destruction.

Those teeth enemies are most active while you sleep, because they can work undisturbed between the teeth where particles of food may remain.

So clean your teeth with Colgate's Ribbon Dental Cream every night. Use Colgate's every morning, too—safe, sane, and deliciously flavored.

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THE OLIVER OIL-GAS BURNER

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Give Farmers A Square Deal

By B. F. Moomaw, Virginia

We have heard for years preached from the pulpit, heralded from the stump, proclaimed in our halls of legislature, state and federal, affirmed and reaffirmed by captains of industry and bankers, the doctrine of agriculture being the basis upon which this great nation is founded and builded. Yet today every class of people and business mentioned above have apparently delegated to themselves the task of hammering the very life out of agriculture in all of its varied lines and products. It appears that the banking system of the nation, particularly, is taking the lead in this pounding. In spite of the published fact that the federal reserve system has said "food production is essential," yet in a number of instances, farmers, orchardists, and cannery are not able to secure sufficient finances with which to operate, and today we know that many products of the farm, orchard and cannery are being sold at a great loss, below actual cost of production.

The banks and bankers, and all other individuals and classes of business dependent upon the farm, orchard and cannery for their three meals per day, yes, their very existence, physically and financially, shall live to rue the day when they adopted this policy.

To the man who knows the first letter in the alphabet of agriculture, it is not necessary to remind that every item entering into the cost of food production, a few of which are labor, machinery, fertilizer, freight and containers, are costing more than before in our memory.

I have no word of approval for the man or firm who wilfully hoards and speculates in the great food products, or who, for an unreasonable profit, will force hunger. As a class, however, the farmer, orchardist and cannery are not, nor have they ever been, hoarders or speculators. This evil has been indulged in for the most part by individuals and firms who have no interest, or any part, in the task of the nation's food production.

My plea now is that farmers, orchardists and cannery, be able to at least obtain cost of production for their products now producing or produced. That this basic industry be saved from great financial loss and disaster, now, that the nation may not go hungry next year, or the next.

Where is the banker, manufacturer or merchant who, on January 1st, 1921, will enter the next year, knowing that his business will meet with financial distress and disaster? What would become of the great urban population of America and the world, if the food producers should cease their operations for one year?

I maintain that it is as important to the commercial existence of the nation that the business of producing the country's food be saved from financial distress, as the railroads or any other branch of industry or commerce.

CALLED A "TRUST"

Some months ago the federal government brought suit against the California Associated Raisin Company seeking its dissolution on the grounds that it was operating contrary to the Sherman anti-trust law. Through the legal proceedings that have been instituted in the meantime, and a careful investigation of the business of the Associated Raisin Company the government has agreed to drop that portion of their complaint which asked the company to show cause why it should not be dissolved under the anti-trust law, but will continue the suit for the settlement of other matters.

At a preliminary hearing of the suit in September the Raisin Company agreed to sell a certain portion of its raisins to independent packers, to cancel a contract with the California Packing Corporation which has had the exclusive right to buy from the Raisin Company, and to

(Continued on page 26)

GOOD WILL TRIUMPHANT UNDER TEST

As this message is being written, Dodge Brothers' daily, weekly and monthly production, is at the highest point in its history.

The most casual sort of inquiry will satisfy you that this production is being absorbed as it is delivered.

Within sight and sound as we write, a great addition to Dodge Brothers' immense works, is being rushed to completion.

The interesting thing about this situation is, that it is not likely that a half a hundred people have ever bought Dodge Brothers Motor Car just because they wanted a motor car.

Of the more than half a million who have bought it—the overwhelming majority did so because of the name it bore.

It has always been treated, by the American people in particular, as an exception — always set apart, and singled out, and never judged by ordinary standards.

It has always been thought of, and is still thought of, first, and foremost, and all the time, only in terms of its goodness, and the results it gives.

All of this is wonderful, in one way, and quite natural and logical in another.

It all dates back to the day when John and Horace Dodge conceived and designed and finally built the car — after warning each other, and their associates, not even to think of it in any other terms than the best obtainable value.

They began with a few almost absurdly simple principles, bluntly expressed and rigidly executed, about decency and honor and integrity—

such as most of us wrote in our copy books at school.

They reduced these old copy book maxims to a splendid and scientific system, pouring more, and more, and still more value into the car, and then marshalling all the resources of modern massed manufacture to get their product into the hands of the people at an honorable and an honest cost.

These policies and principles have never been changed, and never will be changed, by so much as a hair's breadth; and they have come to be recognized and accepted as Dodge Brothers principles wherever motor cars are driven.

It has all happened as John and Horace Dodge planned it—quite simply, naturally, and automatically, all over America, and all over the world.

People do discriminate, as Dodge Brothers contended they would; people will find out when a motor car is well built and gives good service and great good value.

Dodge Brothers market today is where they planned to locate and establish it—in the mind and the heart of every man and woman who admires good work, well done.

It will last, and it will keep on growing, as it has kept on growing for five years (faster than Dodge Brothers works could keep pace with it), as long as the number of those who believe that a manufacturer should build to serve and not merely to sell, continues to increase.

All is well with Dodge Brothers today, because John and Horace Dodge build well in the beginning, and because their business will continue to build well until the end.

DODGE BROTHERS, DETROIT

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How to tell a lack of and poor layers; how to feed to double egg yield; how to keep flock healthy; ventilate houses in winter; get good hatches, strong chicks — 1,000 poultry secrets made plain in 13 lessons. Recommended by 25,000 standard. Guaranteed to double profits. FREE BOOK, "Dollars and Sense," gives all the facts. Write today, AMERICAN POULTRY SCHOOL, Dept. 488, Kansas City, Missouri.

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Be sure of your strawberry plants by wiring or writing your order now. Plants of every variety are being set out at a faster rate now than at any period during the past ten years. Our bookings for fall are the heaviest we have ever had. At present our stock of Klondike and Aroma strawberry plants is one of the largest and choicest in the country. We also have a fine lot of Excelsior, Missionary, Lady Thompson and Gandy. Also offer leading commercial sorts of June budded Peach and one year Apple. Wire or write for prices now—today and let us set your allotment aside. CHATTANOOGA NURSERIES, Chattanooga, Tenn.

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The Luck of the Irish

By HAROLD MACGRATH

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UPON a certain June afternoon, toward the end of the month, had you looked into the cellar of Burns, Dolan & Co.'s plumbing shop you would have found a certain young Irishman by the name of William Grogan eying mechanically, yet professionally, the glowing end of his soldering iron. There was a fixity in his gaze, a lackluster in his eye, familiar to all psychologists of dreams. The iron fell upon the drain-pipe scientifically, because William had reduced the building of dreams to a fine art. Having set his hands to their appointed task, they proceeded to go on automatically, leaving his spirit free to roam as it listed. He was like that Hindu Yogi who could set his body grinding corn, take his soul out and go visiting with it.

William belonged to the supreme order of rainbow-chasers. All horizons were merely circles of linked pots of gold. It follows naturally that he possessed a fleet of serviceable magic carpets; and he sailed with superb confidence toward his rainbow-ends. If this or that one vanished, presto! he promptly arched another. It cost nothing. He was twenty-four, and that is the high noon of the rainbow-chaser. Beyond this age one begins to look back at the wrecks.

In parenthesis, before I go any farther, do you believe in magic carpets, in our times better known as day-dreams? I mean, do you believe in letting yourself drift on the wings of a pleasant fancy at odd moments during a dull workday? If you know anything about the preciousness of these little intervals between actions, when you stand or sit motionless and gaze beyond the horizon into that future which presently or by and by is to roll over the rim of the world with fulfillment—why, then, come along. For this is a story of a rainbow, part of which was found.

There are two kinds of poets, professional and instinctive; and William was a poet by instinct. He could not express himself in words; his rhymes were visions. He was by trade a journeyman plumber; inclination as well as necessity had driven him into it. He found Romance in lead pipes, sheet tin, gas and water mains. To his mind there was nothing quite so marvelous as the amazing cobweb of pipes and mains that stretched across the great city a few feet under the surface. Who but a poet would have stripped in fancy the masonry from the cloud-touching monoliths, and viewed the naked pipings, twisted and elbowing, bending and rearing, more wonderful than any magic beanstalk—water and power and light!

BORN in New York, thrown upon the streets at nine, at an age which poets (the professional kind) love to call tender, but which in reality is tough, William was, at twenty-four, a thoroughly metropolitan product. He was keen mentally, shrewd in his outlook, philosophical as all men are who in youth knew rude buffets, hunger, and cold. He was kindly, generous, quick-tempered, and quick-forgiving, and he was not above defending his "honor and territory," when occasion required, by the aid of his fists. An idea, entering his head, generally remained there; and when he offered his friendship his heart's blood went with it. He was Irish.

He talked in the argot of the streets; not because he knew no better, but because habit is not only insidious, but tentacle. It was only when he began to attend night school that he was made to realize that he was not a purist; and, being ambitious, he strove to curb his passion for unorthodox English. On guard, he spoke sensibly and correctly; but if he became excited, embarrassed, or angry, he spoke in argot because simple English seemed to lack what

he called punch. Strange lingo! All nations possess it, all nations that have vagabonds and thieves and happy-go-luckies; and William was a happy-go-lucky.

The carpet he was sailing on at this precise moment was the choicest Ispahan in his possession, his Ardebil: a home all his own some day, a garden to play in, a wife and a couple of kids.

Presently the smell of sizzling resin brought him back to port. That was the one fault with his ships of wool: they were always bringing him back to port before he really got anywhere. He thrust the iron into the cup of the gasoline furnace, and sighed. June

OUT of this fantastical world of shod feet, one pair became of peculiar interest. They were feminine; and it was but natural that William should build him a romance. Their regularity of appearance first appealed to him; later he added little characteristics. She was young, sensible, and a wage earner like himself. She was young, because there was always a spring to her step; sensible, because she wore low shoes in the summer and stout boots in the winter. There was no nonsense, no embroidered silks; old-fashioned lisle and wool were good enough for her. That she was a wage earner there could be no

HERE IT IS

This is the first installment of Harold MacGrath's fascinating story of adventure, mystery, and romance—"The Luck of the Irish." Installments of it will appear from month to month in these columns, and you will enjoy reading each one as it appears. Begin with this first chapter, and follow through the series. The story is brim full of thrilling adventures and narrow escapes for the hero, William Grogan, as he journeys around the world

was outside; and somewhere clouds were being mirrored in the streams winding along the flower-laden lips of green meadows, birds were singing, and gay little butterflies were fulfilling their brief destinies in the clover fields. He knew that such things were going on, because he had read about them.

"Aw, and me here in this cellar!" he murmured. He directed his gaze toward the basement window above him, toward the brilliant sunshine which broke in dazzling lances against the glass in the shop across the street. He was very fond of this window. It was the one bright spot in his rather dull and grimy existence in the employ of Burns, Dolan & Co., steam-fitting and fixtures.

Day after day, in rainy or sunshiny weather, he viewed the ever-changing panorama of boots and shoes; fat ones and slim ones, the smart and the trig, the rundown and the patched. He saw youth and age pass; confidence and hesitance, success and failure, joy and hopelessness. The step of each passer-by was to him a wonderful story whose plot was ever in embryo. Whence did they come, these myriads of feet, and whither did they go? The eternal stream which flowed past that little window! There was ebb and flood all through the day, and the real marvel of it was that each pair of shoes was going somewhere, had a destination and a destiny. Out of this pair or that William constructed the character of the owner; and he often builded better than he knew. He saw this strange world of his through the eyes of a Balzac; but he could only visualize, he could not transcribe his deductions or marshal them coherently. He knew that this man drank for the joy of it, that that one had something to forget; he knew when old man Hennessy had just lost his job and Heinie Stahl had found one. Here was a young woman going to meet her lover; here was one who carried a headache; all in the step. And there was the broad, flat, shapeless shoe belonging to all sorts and conditions of women, from Tony Cipriano's thrifty wife, always bearing children, down to the wheezing, gin-soaked virago who scrubbed floors for her 10-cent pieces. Nor did he ever grow tired of the angular legs of childhood, these were the leaven of humor in a grim procession of tragedies. Wasn't that the baker's kid that just went by, hippy-hoppity, headed for the soda fountain?

doubt. At eight o'clock each morning, Saturday and Sunday excepted, she walked east with confident step. Never had he seen it drag or falter. It was a small and shapely foot, alluring, but not enticing. Perhaps the picture lasted three seconds; eastward at eight in the morning and westward at four in the afternoon, four or thereabouts. He pondered over these hours for some time before he fell upon the truth of the matter. She was one of the teachers in the public school nearby. Saturdays minus and the gap of July and August could in no other way be explained.

For three years now these little feet had twinkled past the basement window. The odd part of this singular one-sided romance, William was never tempted to run up to see what the young woman looked like. He was canny for an Irishman. He rather preferred his dream. There were lots of homely young women with pretty feet. He hadn't many illusions left, this young philosopher of the soldering iron, and he wanted to keep this one. Besides, what good would it do to "pipe her fiz"? If he spoke to her she might put him down as a masher and walk to school by another route. Let it be as it was, her world outside there in the sunshine and his in this smelly cellar. But, nevertheless, he often wished he knew a girl such as he imagined this one to be. One thing was certain: anywhere in the world, in any kind of leather, he would recognize those feet. And thereby hangs this tale.

I have forgotten to mention that William was an orphan. Once upon a time this condition had embarrassed him considerably; it had forced him to make his bed in empty halls and areaways, in stables, in dry-goods boxes; but as he prospered he outgrew this sense of isolation and this style of habitation. His father and mother had died within a few months of each other. The father, a sober, industrious Hercules, had been killed out in the railroad yards where he had served as section boss. The widow had received his last pay envelope, and that had been sufficient to pay for his casket. Naturally, this casket had to have silver handles and a silver plate with his name and sundry encomiums engraved upon it lest in the final census he be overlooked. When the widow died the kindly neighbors saw to it that the casket was just as fine, which entailed a noisy valedictory of the Grogan household effects.

Hence, on the night following her burial, William found himself under a counterpane of stars, lonely and distressed, but cheered occasionally by the thought that he would not have to go to school any more. William's inheritance was therefore but slightly in excess of what it had been upon his arrival; the clothes on his back and a growing boy's appetite.

TODAY, however, all these difficulties were vague memories. I doubt if he ever looked back. He was of the breed who are always looking forward, hunting for stepping-stones. He drank a social glass of beer occasionally, smoked strong tobacco, weighed one hundred and ninety pounds, was as tough and sturdy as a coastal oak, and marched along the straight road, because if his hands were steeped in grime, his heart was clean.

Fifteen lonely metropolitan years, some of them fields of muck, others narrow and dangerous as tight ropes, still others like the trail up the Matterhorn; and to come through unscathed, with a sound body and a sane mind! The truth is, William was born with a strong sense of humor, which, as a life raft, has carried more human beings into safe harbors than the ten thousand decalogues of the ten thousand creeds. There was an ironic edge to this humor, however. Men who are born and bred in New York and begin life in the streets never quite lose the gamin's sardonical outlook.

I wish I could truthfully state that William was handsome. The clay was rich and beautiful, but the finishing touches would have barred him from a niche correspondingly as prominent as that given the Apollo in the Vatican. In repose his countenance was rugged; animated, it became merry and smile provoking. There was a generous sprinkling of paprika on his pug nose and on the adjacent sides of his cheeks; and his hair was so red that, given the proper foreground and perspective, he might easily have been mistaken for a Turner sunset. Perhaps the Master, having given William a perfect body, considered it unwise (for William's welfare) to add a perfect face. Even then, in one particular, he had relented. When you looked into William's eyes, you forgot the red hair and freckles. These eyes were as blue as Ionian seas, kindly and mirthful, and there was something electric in them, something which mysteriously flashed blue fires like the sea water in the famed Blue Grotto of Capri; the eyes of a fighter who could also lose himself in fine dreams.

He read a good deal, borrowing his books from the great public library; and his head was filled with an odd jumble of classics and trash, truth and untruth; and his faith in what he read was boundless. But humanity could not fool him.

Out of this reading he wove a second magic carpet, nearly as attractive as his Ardebil. He longed to travel, to see Europe, Africa, Asia, all those queer places he had read about. He yearned for trains, steamships, donkeys, rickshaws, camels and elephants, jungles and snowcaps, deserts and South Sea islands. He wanted to shake down coconuts by hand, pick oranges and bananas; he wanted a parrot that could talk like Long John Silver's—"Pieces of eight! Pieces of eight!"

"A fat chance!" he always murmured upon dispersing these tantalizing visions. "A home run in the last half of the ninth inning!" Hadn't it taken him six years to save up eight hundred dollars. And how far would that carry him? About as far as the Hoboken docks.

Four o'clock! She'd be dancing by
(Continued on page 22)

rowing her
elf under a
y and disa-
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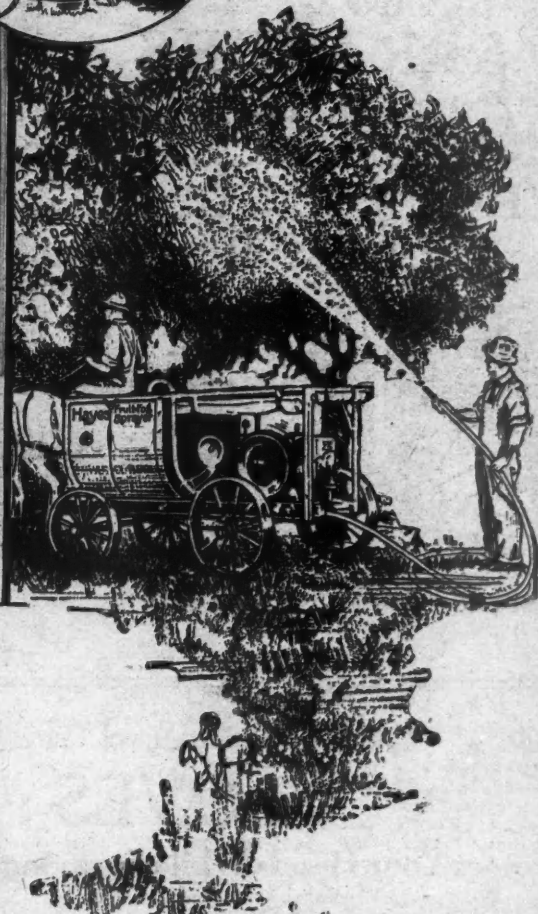
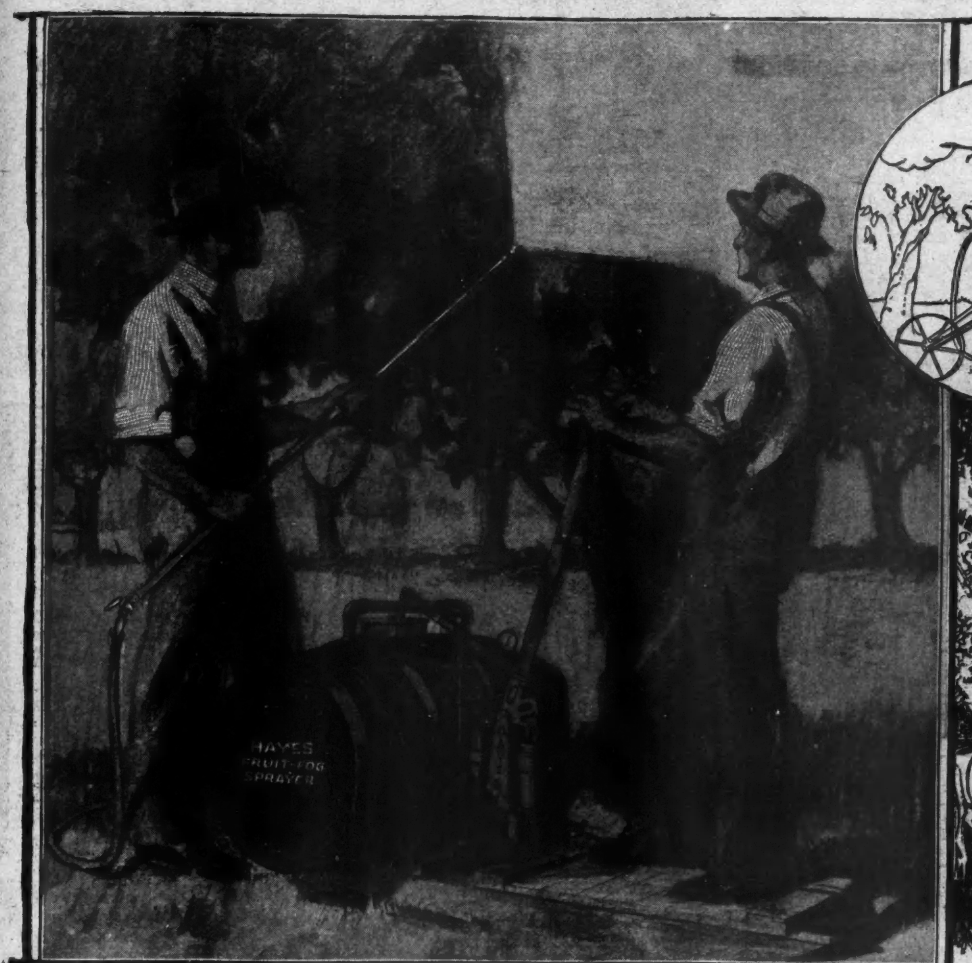
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Are Pests Costing You \$100 to \$5,000 Per Year?

EACH season American farmers are losing—absolutely wasting—the appalling sum of hundreds of millions of dollars. The cause is countless hordes of destructive farm pests.

Will this *unseen* army of vicious, life-sapping pests sweep down upon *your* crop—and leave barren destruction in its wake? Will *your* part of this terrible waste amount to \$100, \$500 or as much as \$5,000?

Such frightful losses are common. Yet they can positively be stopped by spraying! You can drive the San Jose Scale, Codling Moth, Scab, Blotch and other deadly pests and diseases from your apples, peaches, pears, plums, citrus and other fruit. You can also drive destructive, tormenting bugs, lice and mites from your valuable potatoes, hogs and poultry.

Send for our FREE Book and learn how the Hayes System of Fruit-Fog

Spraying will kill these pests. How this scientifically atomized super-spray envelops every twig, leaf and bud with a vapory, fog-like solution. And why it has wonderful penetrating and adhering power, such as no ordinary coarse spray can possibly have.

Then you will understand why Hayes spraying works into the tiny microscopic niches, cracks and crevices in bark, buds and foliage—and kills *every* pest.

That also explains why thousands of fruit growers and farmers credit their fine profits to Hayes spraying. It will add \$100 to \$5,000 or more per year to *your* profits.

Send the Coupon Today

Tell us what you want your sprayer to do, and we will tell you which of the Fifty Styles of Hayes Sprayers is best suited to your needs, and its price. We will also send our New Book of Hayes Sprayers and valuable Spraying Guide FREE.

HAYES PUMP & PLANTER CO., Dept. P. GALVA, ILLINOIS

HAYES

FRUIT-FOG Sprayers

Spraying

—will save your

Apples	Cherries	Potatoes	Shade Trees
Peaches	Berries	Cabbages	Sugar Beets
Plums	Flowers	Tomatoes	Cucumbers
Grapes	Melons	Alfalfa	Field Crops

—will protect your

Hogs	Cattle	Poultry
Sheep	Horses	

—will help you in

Whitewashing	Washing Windows
Cold Water Painting	Disinfecting

Hayes Pump & Planter Co., Dept. P. Galva, Ill.

Please send FREE and without obligation your Big NEW Book of Hayes Sprayers and your valuable Spraying Guide.

Number of trees.....Average age.....

Other uses.....

Name.....

P. O.....

State.....R. F. D.....

10 Years of real protection

After ten years of continual use, one "Friend" owner* says, "I am using a 'Friend' Sprayer because it costs less to operate and causes less trouble than any sprayer I have ever seen."

"FRIEND" New System SPRAYERS

Before you decide on any sprayer, find a "Friend" owner. He will tell you what "Friend" construction means—not only in ease and speed in spraying, but in the actual saving of money from fewer replacements, fewer repairs.

"FRIEND" MFG. CO.
Gasport, New York

*Name on request



"Friend" Spray Gun

The addition of this accessory to any machine does away with the old system of a pole and lower, and actually puts the spray where you want it.

Postpaid
\$10

Uncle Sam's Hired Men Who Serve You

By John Anson Ford

CHARLES F. MARVIN, chief of the Weather Bureau, was "discovered" by a famous Arctic explorer—not while the latter was in the northland, to be sure, but in Washington, D. C. The story goes back to the '80's, not long after young Marvin had passed a civil service examination and secured an appointment as "junior professor"—an odd title designating a position in the signal corps, which in those days carried on weather forecasting and related work known to science as meteorology. It was the famous discoverer of new land north of Greenland, Major General A. W. Greeley, who discerned, while head of the signal corps after his return from the north, that Marvin possessed exceptional ability in mechanical engineering. He foresaw the great service which the young man might render to his country in the weather forecasting organization, and opened the door of opportunity for him.

"I told you so," the venerable General says in effect, when folks talk about the record Marvin has made in the 30-odd years he has been working



Charles F. Marvin

for the government. "I am proud to take a good deal of credit for having started him on a path which has led to wonderful achievements."

It seems a far cry from mechanical engineering to weather forecasting. Let the reader remember that 85 to 90 per cent of the day-to-day forecasts of the Weather Bureau are accurate and that this remarkable record has been possible because of the increasing skill of the forecasters, supplemented by one of the most extraordinary collections of scientific apparatus and instruments to be found anywhere in the world. Among the inventors of these meteorological instruments Mr. Marvin stands first.

Had Mr. Marvin spent his life in private employment and made as many fundamental inventions for some chosen industry as he has while in government service he would have been rewarded many times over what Uncle Sam has paid him. When he became chief of the Weather Bureau in 1913, after 29 years of service in subordinate positions, his salary was placed at \$5,000. There it has remained, regardless of the H. C. of L. and his invaluable contributions to a government service which annually saves the farmers, through its timely warnings, hundreds of thousands of dollars loss in livestock and crops; a service which also acts as the trusted lookout for numberless shippers on land and water, warning them of approaching storm, cold or heat; a service performing a score of other important tasks touching the Nation's daily life. One of the most remarkable facts about the Weather Bureau is that in recent years not a single great storm has occurred in this country which has not been adequately heralded by the government's forecasters.

(Continued on page 21)

OAK DALE FARMS Austin, Minn.

The S. C. White Leghorns you sent me recently arrived in first class shape. We won first young pen, first pullet, and on the cockerel in the first young pen we were awarded the best cup for having the best cockerel in the show, all breeds competing; also the silver medal given by the American Beauty Poultry Association.

Yours truly,
Matt. C. Abts,
Columbus, Neb.

This is only one of the thousands of letters we have received from careful poultry raisers who buy from our famous flocks of prize winning or heavy egg producing strains of S. C. White Leghorns.

Write for our Free Catalogue.
Dept. G 2

OAK DALE FARMS AUSTIN-MINN.



McAdoo-Akron Rubberized Canvas

GLOVES

Protect Your Hands While Spraying

Don't suffer cracked and bleeding hands from using lime-sulphur or other Spray Mixtures.

McAdoo-Akron Rubberized GLOVES

give thorough protection from caustic action of all sprays. Water-proof, chemical-proof, light weight, tough and wear resistant, unequalled for all outdoor work in cold, wet weather. Keep the hands warm and dry. The ideal glove for working around machinery. Try one pair and you will never be without them. Mr. Thor Schreiber of Fennville, Michigan, says: "One pair of McAdoo-Akron Rubberized Canvas Gloves gave me wear equal to buckskins I paid \$2.50 for." One pair sent to any address postpaid for \$1. Buy them by the dozen. Dealers wanted everywhere.

McADOO-AKRON CO.

Akron, Ohio



DOWN
WITH PRICES
ONLY
\$4.35
MAIL POSTAL
TODAY

**SEND
NO
MONEY**

Highest Quality Work Shoe. Lowest Price! Made of special solid leather. Two full soles, extra leather heels. Check full of comfort and wear from point of ordinary work shoes. You save \$2 to \$3 on every pair. Brown or black. Our national selling campaign has money every time. Simply send your name, address, size and color wanted; get your shoes. If not returned and postage money back. You take no risk. Don't delay—order now. You have your shoes for \$4.35 and the balance over \$1.00. SAMPLES SHOWN CO. Dept. 71, New York City

Quality First

**Boston
Garter**
That Grip



Quality Always Wins

In every walk of life, doing something better than the other fellow spells success. Boston Garter's success is just a matter of being ahead in quality and workmanship, giving wearers the greatest satisfaction. **GEORGE FROST CO., BOSTON, MAKERS OF Velvet Grip Hose Supporters For Women, Misses and Children**

WITTE

2 H.P. ENGINE PULLS 2 3/4 TONS

\$54.95 From Pittsburgh Add \$8.

35th Year

Direct from Factory to You

ALL SIZES AND STYLES
2, 3, 4, 6, 8, 12, 16, 22 and 30 H.P.

LOW PRICES

Don't wait if you need any size or style engine. NOW is the time to buy. Life Guarantee Against Defects. Big surplus horse-power. Above price includes engine complete on skids, ready to operate when you get it. Safe delivery guaranteed. Immediate factory shipment. Write or wire for New Big Engine Catalog FREE.

WITTE ENGINE WORKS
241 Oakland Ave. **PITTSBURGH, PA.**
241 Empire Bldg. **KANSAS CITY, MO.**

Kindly mention American Fruit Grower when writing to advertisers

Mr. Marvin's contributions to his chosen science have received gratifying recognition in the scientific world. When the office of chief of the Weather Bureau became vacant in 1918, President Wilson asked the National Academy of Sciences to submit a list of men it would recommend for appointment. Mr. Marvin's name was one of four submitted. His appointment as chief came as a well-merited reward.

Of all the varied services under Marvin's supervision, first in importance is the work of the Forecasting Division, which receives and charts twice daily telegraphic reports of prevailing weather conditions, and issues statements of impending weather changes. In the case of severe disturbances, warnings are issued along the lakes and sea coasts. The frost and cold wave warnings are invaluable to many interests, including the trucker and fruit grower, especially in the spring when tender vegetation needs protection.

The aim of the Weather Bureau, as guided in its enlarging program by Mr. Marvin, has been to serve wherever its facilities and a special need made service practicable. The variety of special uses of the storm warnings illustrate another phase of the practical value of the forecasters' service.

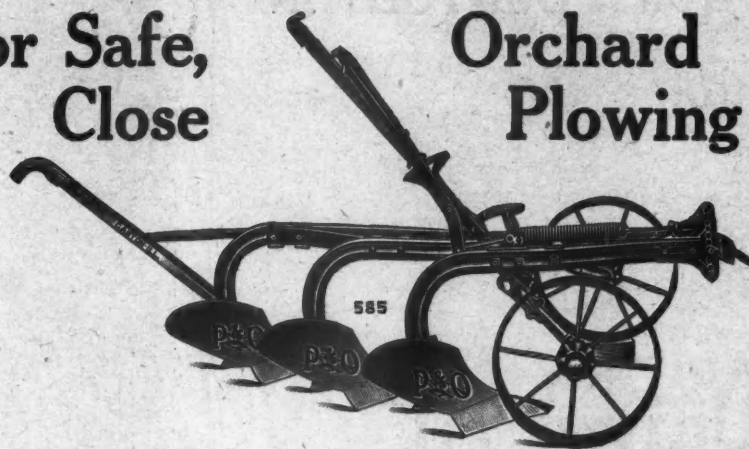
The Division of Agricultural Meteorology, another branch of the bureau, supervises the work of about 400 special observers maintained in connection with the corn, wheat, cotton, sugar, rice, tobacco, fruit, and other industries. It has charge of the distribution of the special warnings issued for the benefit of certain crops and publishes data showing weather conditions throughout the country and the effect of these conditions on certain important crops.

The bureau maintains throughout the United States, in the West Indies, Alaska, and Hawaii about 200 meteorological stations employing from one to 15 persons especially trained in gathering data on which the forecasters, located at five points in the United States, base their daily predictions which, combined, cover the entire country. Mr. Marvin, while not specializing in forecasting himself, feels that these men at the observation stations and the forecasters deserve a larger measure of credit than is popularly accorded them.

"The public does not always realize the tremendous responsibility resting on these men," said Mr. Marvin in discussing weather forecasting. "It's no 'fair weather' job that they have. Eternal vigilance is their motto. Who can measure the responsibility that is theirs when a great storm sweeps across the country? Did you ever stop to think what would happen to ships, trains, livestock, unsheltered stores of goods, and a thousand other interests, if the Weather Bureau was not on the job when one of those West Indian hurricanes comes roaring up out of the Caribbean? I know of no other man whose task equals the forecaster's at such a time. He must be in touch every two hours with all our stations down in the southwestern section of the United States and points beyond our coast. At the earliest possible moment he must warn the section of the Gulf coast which he believes will be struck by the monster of destruction. It may be Pensacola; it may be Galveston; or it may be in between. He must decide, and send forth the warnings. I take off my hat to these men, and if I can devise an instrument or a piece of apparatus that will make their task easier, by giving them more complete and accurate data, I am proud to make such a contribution as part of my service to this great national servant, the Weather Bureau."

And this is only one bureau of the 17 that go to make up the United States Department of Agriculture, all working together, each using information furnished by the others in planning and suggesting better methods in agriculture for the direct benefit of the farmers and also for the benefit of every other citizen of the United States.

For Safe, Close Orchard Plowing



In orchard plowing it often is good practice to turn the ground close to the trees or bushes. This requires an easily handled, compact plow such as the P & O Sunset Vineyard Gang or P & O No. 7 Orchard Gang.

The weight of these plows is nicely balanced on a pair of front-cranking wheels, making the plows easy to steer, lift from the ground and turn, and the wheels are set close to the beams so as to track inside the path of the plows. This feature, coupled with the easy-control steering handle, which is attached to the rear beam, makes it possible to plow close to trees or bushes without

danger of injuring them. These plows are also adapted to open field work.

The P & O Sunset Vineyard Gang is made in both two- and three-bottom sizes, the bottoms being 8 inches wide and having hard steel molds with solid steel shares and cast landsides.

The P & O No. 7 Orchard Gang is supplied with either two or three 10-inch general purpose bottoms that pulverize the soil very effectively. These bottoms also have the hard molds, and are equipped with quick-detachable, hard steel shares.

P & O well-known quality, design, and construction, backed by International Harvester after-sale service, which is always available in any emergency, are your assurance that a P & O Vineyard or Orchard Gang Plow will prove a satisfactory investment.

See your nearby International dealer about one of these plows.

INTERNATIONAL HARVESTER COMPANY

CHICAGO

OF AMERICA
(INCORPORATED)

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92 Branch Houses in the United States

NOW MOTHER, WE ARE THROUGH CARRYING WATER



MYERS SELF-OILING ELECTRIC HOUSE PUMP SUPPLIES EVERY WANT

"Mother, we have been carrying water all our lives—think of the thousands of trips we have made to the well and the tons of water we have carried during all these years, and now we are through. The pump man who is installing the new MYERS ELECTRIC HOUSE PUMP for us told me that he would finish this afternoon, and then, goodbye water drudgery forever."

Such relief is coming to innumerable homes like yours through Myers Electric and Hydro-Pneumatic Pumps. If you are still carrying water and are sick and tired

of the endless task, write us. Without the least obligation on your part, we will mail you our latest Catalog showing Myers "House-Bit" Pumps for Every Purpose, and tell you how and where to obtain them.

F. E. MYERS NO. 150 ORANGE ST. ASHLAND PUMP & HAY TOOL WORKS



KITSELMAN FENCE

Get It From the Factory Direct. We've knocked the bottom out of high cost of fence building. We Pay the Freight and save you money. Here's a man that

Saved 38 per cent. Mr. R. B. Ollard, Milton, Ohio, writes: "I found all the fences as good or better than I expected. I saved \$28.68 on my \$75.00 order."

You will never know how much you can save thru our DIRECT FROM FACTORY TO FARM selling plan until you get our free catalog. Write today KITSELMAN BROS. Dept. 255 Muncie, Ind.

1921 Model Watch \$295

to introduce our watches. This model, beautifully polished silveroid case. Men's and women's size. Fitted with high grade movement, fully tested. Stem set and stem wind. EVERY WATCH GUARANTEED

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C.O.D.

Send us your name and address plainly written, at once. We'll send this beautiful watch by return parcel post. Pay nothing until you receive it. We'll refund your money. Send your order TODAY! Special offer: Gold filled chain \$1.49 extra. Cambridge Watch Co., 1125 Cambridge Bldg., Chicago

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SHIP YOUR POTATOES IN



Universal Package

Storage rot, one of the biggest causes of shipping losses, comes from bruised potatoes. Your potatoes will not be bruised if they are shipped in Universal Packages. Their great strength positively prevents crushing. Not only will they arrive at market in perfect condition, but these attractive packages will insure your getting top market prices. Hold standard bushel. Covers fasten without nails. Every fruit and vegetable crop can be satisfactorily shipped in Universal Packages.



Write for this FREE Bulletin

It will be mailed on request to any grower or shipper without charge. Gives new methods, tells how to prevent storage and shipping losses, shows how other men solved problems that trouble you. Keeps you posted on new legislation, conventions, market data, etc. Illustrated. Published solely in interest of growers and shippers.

Ask for it TODAY

Package Sales Corporation

104 E. Jefferson Street

SOUTH BEND, IND.

Are You Using Ancient or Modern Methods?



THE farm-wife who carries heavy buckets of water, labors under the same handicap as the women of uncivilized tribes who shoulder earthen water-jars or stoop under goatskin bottles.

This labor may be necessary in unenlightened countries, but there is no excuse for this condition in American farm life!

A Deming Water System is so reasonable in price, so simply operated, and so easily installed that no farm-wife should be forced to perform her household tasks without the convenience of running water at the turn of a faucet in kitchen, laundry, bath and dairy.

Write us the size of your farm, number of persons, amount of stock, source of water supply and available power, and let us recommend the most efficient Deming System for your exact needs, and quote price. You will not be obligated in the slightest.

THE DEMING COMPANY

935 Depot Street

Salem, Ohio

"Hand and Power Pumps for All Uses"

Deming

WATER SYSTEMS

Catalog Free

Luck of the Irish

(Continued from page 18)

in a moment or two. Next week she would be going away on her vacation. He set the drainpipe in the corner and put out the furnace. He pressed some "scrap" into his corn-cob pipe and waited. There she was! One, two, three and she was gone. Tan shoes and stockings and a bit of blue skirt. It was all over in three seconds, like one of those moving pictures.

"He-y, Bill!" someone called, from upstairs.

"Ye-ah. What's wanted?"

"Letter for you. Shall I throw it down?"

"I'll be up."

A letter? Who could be writing to him? He never had any bills; he paid as he went along. He rammed his unlighted pipe into his hip pocket and mounted the stairs. The young girl who acted as bookkeeper, stenographer, and cashier thrust the letter into his hand.

"Oh, you William!" she cried. "Some girl we don't know anything about."

"Aw!" He studied the envelope doubtfully. "Hargrave, Bell & Davis, attorneys and counselors at law. Say, Susie, have I been buying a sewing machine, or have I fallen for some nifty book agent's gab? I don't know any lawyers."

"Open it and see," advised Susie.

The letter was coldly brief. William Grogan was requested to call upon "the undersigned at his earliest convenience." Nothing more than that. William read it over four or five times, and it grew colder and colder with each reading. Lawyers, and after him.

"Where's Burns?" he demanded.

"In the office." Susie returned to her little griled desk.

William walked down to the rear end of the shop and rapped on the office door. Ordinarily he would have entered without formality.

"Say, Mr. Burns, what kind of bunk is this?" He laid the letter upon his employer's desk.

"Humph!" said Burns, who was practically Dolan & Co. also. "What have you been doing?"

"Who, me? Nothing. They haven't lifted me out of the cradle yet."

"Got any relatives?"

WILLIAM scratched his head and blinked ruminatively. "Nobody but an uncle in St. Louis, my mother's brother; an old crab, who got sore because mother didn't marry the flannel-mouth he'd picked out for her. Never saw him nor heard from him."

"Well, you take tomorrow morning off and look into it. If there is any money, Bill, you bring it to me. There's nothing to these lawyers. You bring it to me."

"Sure, Mr. Burns. But it's a pipe there's no dough. Maybe they expect me to settle for the funeral; that'd be my luck."

"Maybe it's a breach-of-promise suit."

"Aw, I couldn't get into the Old Ladies' Home without a jimmy."

"Well, go and see the sharps, and then come to me. Take your mother's marriage certificate along, while you're about it. You got it?"

"Ye-ah. I was only nine when she died, but she was some mother."

"They all are, son, they all are. Haven't put your name on any paper?"

"Haven't had a pen in my hand since I quit night school last winter."

"You never can tell," said Burns, gravely. "But if you've got tied up any way, I'll see what I can do. See you tomorrow." Burns chuckled as William went out. It was a great world.

William, in a distinctly restless frame of mind, left the shop and walked homeward. He was filled with foreboding. Some lawyers wanted to see him, and cold-blooded ones, too, if letters counted. Burns always said that if you went to court for any-

(Continued on page 24)

Why Fruit Trees Thrive or Fail.

When you buy trees for your orchard or garden, and the nurseryman sends the variety, size and quality you pay for—his responsibility ends.

But the life and growth of your trees, and their eventual success or failure depend upon how, when and where they are planted, and the subsequent care they receive, as well as upon weather conditions, the character of soil and the site selected.

Upon the planter's success, rests the success of the nurseryman, and we are vitally interested in the results that are obtained.

Needless Fruit Tree Losses

That there are fruit tree losses, is due in many cases to ignorance and neglect. Professor Moore says, in Bulletin 201, Wisconsin Agricultural Station, "A great many newly planted trees die because of carelessness in filling the hole. The manager of one of the largest orchard companies says '30% of the trees that die, do so because of failure to firm the soil closely about the roots.' Another very common cause of failure is exposure to sun or wind at planting time."

Since the planter's success depends so largely on starting right and keeping right, we furnish our customers with all the reliable, practical information available.

Our illustrated catalog "Better Fruit Trees" which is sent free on request, is a big help to the beginner. It describes tried and tested varieties, giving opening dates of apples, pears and peaches, and tells what to do to make the right start with your fruit garden or orchard.

Every fruit grower should have our 60 page booklet "Inside Facts of Profitable Fruit Growing" which beginners and experts say is

A Wonderful Help to Fruit Growers

To buyers of ornamentals we send "How to Beautify Your Home Grounds." The manual is so great for these booklets that we have to charge 10 cents per copy to all except our customers.

Note—We sell direct from nursery to plant and have no agents or representatives anywhere.

Address: 1108 1/2 Rd. St.

Member, American Association of Nurserymen.

Neosho Nurseries Co.

Neosho, Missouri

\$3.48

Bargain to New Customers

We Pay Postage

Send only your name and address on the coupon below today—and no money—and we'll ship you this astounding, price smashing, shoe bargain, postage prepaid, on approval. See these wonderful soft and pliable leather work shoes. Your money back if you don't agree that they beat any shoe value you've ever seen.



Send No Money

Crash go shoe prices! Manufacturer's price direct to you, jobber's, wholesaler's and Retailer's profit eliminated. Think of it—only \$3.48 for this super-comfort, army-style, brown or black Blucher work shoe. Two full layers of heavy, water and acid-resisting leather. Two full layers of heavy, tough extra-quality leather in the soles. Full grain leather inner soles. Triple stitched and reinforced throughout against wear. Dust-proof bellows tongue. There's nothing you ever saw to beat it at \$3 to \$4 elsewhere. And only \$3.48 on this bargain offer to new customers.

Order a pair on approval now. Send no money. Just your name and size & shoe color coupon. We'll ship it to you. Order from Mr. Fred M. Dunham, Dept. 5248—Chicago.

Send me one pair of army style work shoes. I will pay the postman only \$3.48 on delivery. If for any reason whatsoever I am not perfectly satisfied, and ask more than that they are the lowest values, I will return them at your expense and you will refund my money at once. I risk nothing.

Name.....

Size of shoe.....Color: ☐ Brown ☐ Black

Address.....

Kindly mention American Fruit Grower when writing to advertisers

for November, 1920

Berries in the Puget Sound

(Continued from page 5)

finest, and possibly the largest, in the Northwest. They constitute an employment center, not merely in the picking season when from 800 to 1,000 workers are employed in the day and night effort to keep abreast of the harvest, but they also provide steady employment throughout the year for from 250 to 300 workers, thus making the co-operative fruit growers and cannery associations continual, all-the year round, productive institutions.

During the height of the past season when a greater force of indoor helpers were needed in order to handle the unprecedented production from the fields, the cry for additional workers arose and it was met in a characteristic way. Advertisements were inserted in the daily papers of the nearby towns and cities, and the daily transportation of the workers to and from the cannery was paid as a matter of course, all of this in addition to a more than generous wage scale.

This was carried still further when with an increase in the number of workers at one of the canneries the question of shelter, of homes for the workers, arose. Again it was met in an understanding attitude and 100 comfortable bungalow homes are to be erected to provide adequate housing for the families of the permanent workers.

Leaving the innumerable activities at the canneries, I again wandered out among the homes in the berry fields, encountering everywhere the same cordial, open hospitality that seems to be a part of the place and the specific temperament of the people. There I found a friendly rivalry among the fruit growers to see in what way they can best make inducements that spell home comforts and convenience for the workers in their fields. When house room is exhausted tents are supplied and equipped with cooking stoves, fuel, bunk beds, which more often than not are supplied with good springs and thick, soft mattresses, instead of the once prevalent "straw ticks," all of these together with milk, potatoes, berries and in some cases most of the vegetables that the pickers will need are gladly placed at their disposal. Indeed it frequently happens that when both the shelters and tents are filled to capacity it is not at all unusual for the growers to take several extra workers into their homes rather than to overcrowd the pickers' shelter.

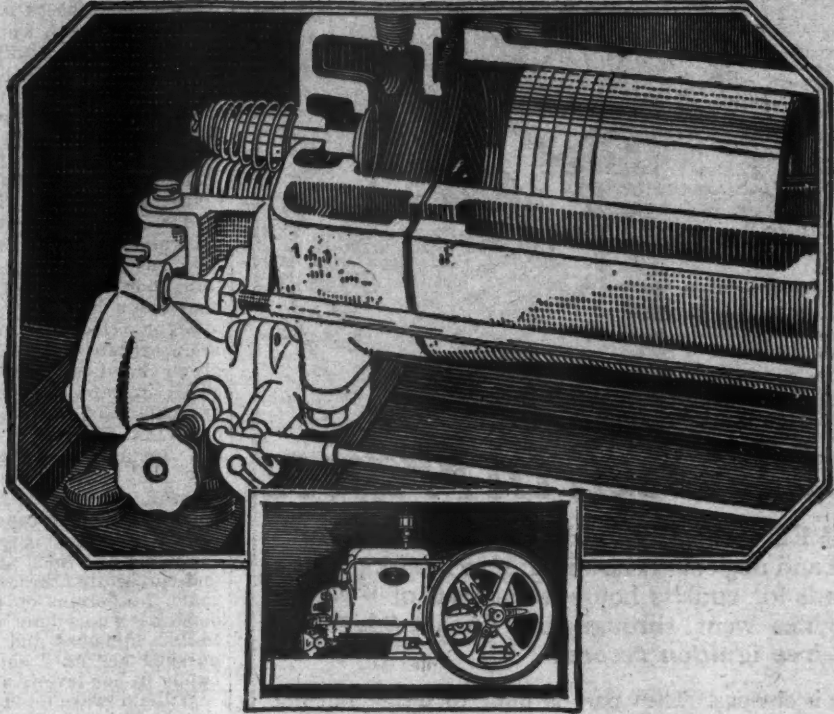
Eagerly anticipating the coming of the harvest many families are "all packed up and waiting" for the first call into the pleasant out-of-doors, when mother and the children will gather the fruit from the laden canes in the valley of the smiling mountain, and father, returning from his day's work in some nearby city or town, will join them for a frolic in the extended twilight that is so enchanting a part of the summer nights in the Puget Sound country, before they "turn in" for the night beside the tents of the other pickers, who may be teachers, students and all sorts of "indoor workers" who are thus breaking from the chafing fetters and getting a tiny share of their rightful heritage of the great out-of-doors, with its sunny skies, and the day's activity in the fragrant fields all bringing about in the best possible way the silvery nights of peaceful, refreshing sleep.

So they return to their homes at the end of the harvest, recreated physically and mentally as well as financially enriched by their great experience.

GREAT CHANGES IN 50 YEARS

Agriculture has changed greatly in the last 50 years. During this period there has been developed for general farm uses such things as electricity, water pressure systems, spraying machines, efficient insecticides and fungicides, motor trucks, tractors, automobiles, silo, Babcock test, rural telephone, hog cholera control, better farm homes and a higher standard of living. Still greater strides will be made in future years.

FAIRBANKS-MORSE "Z" FARM ENGINES



The "Z" Has More Than Rated Power

The work delivered by the "Z" Engine goes beyond the horse power rating we place on it. This is your factor of safety—means increased service—longer life.

The "Z" has large inlet and exhaust valves—easily accessible—insures smooth, steady running—excellent combustion.

Tight compression in the accurately machined and polished cylinder increases "Z" Engine power—reduces fuel and power losses to minimum. Positive, dependable Bosch ignition adds to power output—provides intense hot spark—insures quick starting. Good combustion gives maximum power from each gallon of fuel—decreases carbon—means more power at lower cost.

Other "Z" features are: Runs on kerosene as well as gasoline; Bosch magnet; parts interchangeable; clean-cut design; long life.

Go to your dealer, nearby and let him show you the "Z" engine today.

PRICES { 1 1/2 H. P. \$ 55.00
3 H. P. 135.00
6 H. P. 220.00 } All F. O. B. Factory



FAIRBANKS, MORSE & CO.

MANUFACTURERS - CHICAGO

Feed Every 3rd HOG FREE

Prove at our risk that you can easily save one-third on high priced feed by using

MILKOLINE

which is
Good Buttermilk
Made Better for Feeding
Hogs and Poultry

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FISH BRAND

Reflex Slicker?

Oh Boy! that's protection for you.

Look for the Reflex Edge

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ESTABLISHED 1836
BOSTON, MASS.



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For Home Use

\$2.50 DIRECT TO YOU
An investment that will repay you many times over during all the year around. A bottle capper that puts a cap on every ordinary bottle—fast and sure.

No Failures If You Cap the Bottles Right

Your soft drinks, root beer, near beer, grape juice, etc., will be a real treat if you are properly equipped to cap the bottles right. Our capper is a marvel of efficiency, yet simple and easy to operate. Order one today—and you will have it in less than 100 per cent. It should be in every home—now is the season you will use it most. Send us only \$2.50 and we will send bottle capper by return mail, postage free.

Cedar Rapids Foundry & Machine Co.
Copper Dept. A., Cedar Rapids, Iowa

Kindly mention American Fruit Grower when writing to advertisers.



-and in Every Allied Trench in France

MUD-MIRED and water-soaked; wrecked and rebuilt; abused and neglected; now idle; now laboring under maximum loads for endless hours, thousands of Webster-equipped engines went through the Great Adventure with a **fault-free ignition record.**

And the reason is obvious. The part is built to insure but one smooth-running, dependable result: **steady, sure spark action.** Webster has no gears. No moving wires. No brushes. No rubbing contacts to be damaged by excessive speeds. **Nothing to wear out. Nothing to get out of order.**

The magnets are the finest Tungsten steel. The permanent, rigidly fixed windings are doubly water-proofed. The unwound inductor runs on a solid shaft in heavy bronze bearings. Every

WEBSTER MAGNETO

600,000 Webster Magnetos are now in use. 85% of the manufacturers of farm engines using make-and-break ignition, supply the Webster as standard equipment. Webster-equipped engines are demanded for sale by the most progressive dealers and farmers everywhere **insist on Webster ignition.**

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WEBSTER ELECTRIC COMPANY
RACINE WISCONSIN U.S.A.

Protect Trees Against creeping and flying insects: disease. TREE-PROTECTO

A wonderful new discovery—a scientific, waterproof, antiseptic compound. Positively the best insurance for your fruit trees against

Apple Tree Borer Peach Tree Borer Brown Tail Moth
Climbing Cut Worms Woolly Aphis Rodent Pests

Why feed your valuable fruit to crawling and flying insects? Tree Protecto gives you double protection. Goes twice as far. One pound makes about 10 lineal feet of band. May be used on young or old trees. Most economical. Not affected by temperature or climate. Ready for use.

TREE SURGERY

Use it any time and especially after pruning and trimming. Best for crotch, cavity or wounds. One lb. tin can \$1.00; 25 lbs. \$22.50, etc. Ask your dealer or write to us, mentioning his name and address.

MORE DEALERS WANTED. WRITE.

Our extensive advertising campaign, just starting, makes this a wonderful opportunity for live dealers. Write for our attractive proposition. Do not delay.

AGRICULTURAL CHEMICAL CO.

North and Sheffield Aves., Dept. 1191

CHICAGO, ILL.

Luck of the Irish

(Continued from page 22)

thing, the lawyers got it. What had he done, anyhow? He combed his hair past thoroughly; but aside from two or three pinochle games over at the engine house (two bits the corner), his record was as spotless and shiny as new sheet tin. Oh well, why borrow trouble? They couldn't get blood out of a turnip, and besides, Burns would see to it that he got a square deal.

Whenever he was worried or in the doldrums, William hied him forth to the near-by moving picture theater. For an hour and a half he could lose himself completely. He could cast off trouble in the lobby, even if that little old man of the sea jumped on his back again as he went out. It was something to have cheated trouble out of an hour and a half.

Eight o'clock that night found him in his accustomed seat. With his toil-bitten hand propping his chin, he gazed in rapt wonder at a caravan of camels as they came superciliously down the sand hills of the Libyan desert. Instantly the scene changed. He saw the bewildered peoples of the bazaars. Turbans and tarbooshes, flowing robes and sandaled feet, fruit sellers and water carriers, tourists in spotless white linen and sun helmets; and presently through this swarm came the heroine on a scraggy little donkey. The villain pointed her out to his minions, and stealthily they pursued her until she was safe and happy in her lover's arms.

William wasn't much interested in the exploits of this heroine, whose salary was large enough to support a South American republic; nor was he certain that the Libyan desert and the bazaars were not located souby-by-east from Los Angeles. But the camels were real; aye, real enough to whisk him away on one of his carpets from Bagdad, overseas, to that wonderful world he was never to see, much as the Irish soul of him hungered for it.

During the short intermission he idly studied the people about him. At his left sat a pretty young woman, in cool but sensible summer clothes. He spoke to her.

"It's a great business."

"Yes, it is," she replied, fingering the single-sheet program.

"A dime, and you can go anywhere in the world. I've always wanted to see the Orient."

HE SAID nothing more, and gave his attention to the screen where the announcements of coming features were being projected. And because he stopped where he did he aroused a mild curiosity in his neighbor. She recognized that here was no masquerade, a phase of the moving-picture theater that had caused her annoyance more than once. He was just a comfortable, everyday sort of young man, who had had a thought, and had expressed it aloud to her merely because she happened to be sitting next to him.

A few minutes later she heard him laugh uproariously at the antics of a slap-stick comedian. She laughed, too, not so loudly, perhaps, but quite as heartily and humanly as this unknown red-headed young man. When the comedy was over he tipped back the seats for her, and presently she lost sight of him in the crowd. She forgot all about him, even as William forgot all about her.

The next morning when he entered the outer office of Hargreave, Bell & Davis, a small boy, not at all impressed by the visitor's ready-made tie and celluloid collar, jumped up and confronted him, coldly and alertly.

"Whad'juh want?" he demanded.

"Whad'juh got?" countered William fiercely.

"Bertie!" called the girl at the typewriter, warningly.

"Oh, so his name is Bertie, huh? Well, Bertie, I eat 'em alive when they call 'em that. I want to see your boss."

(TO BE CONTINUED)

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35 Years' Experience Packed into 60 Pages

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Write today for this Planting Guide

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Just a few pounds on the handle means tons on the stump. When stump starts, throw machine into high speed and out comes the biggest stump, roots and all. Absolutely no other machine like it. Has special, patented features. Recommended by leading Agricultural Schools and Forestry Bureaus. Why have stumps when you can now pull them so easily, quickly and cheaply?

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A. J. KIRSTIN CO., 5017 1st St., Bismarck, N.D.

WINTER FRUIT MEETINGS

November

Seventh New England Fruit Show, Hartford, Conn., November 5-9, 1920.
Maryland State Horticultural Society, Salisbury, Md., November 9-11, 1920.

Rhode Island Fruit Growers' Association Exhibition, State Armory, Providence, R. I., November 12-16, 1920.

Indiana Apple Show, Indianapolis, Ind., November 15-20, 1920.

Third Mid-West Horticultural Exposition, Council Bluffs, Ia., November 15-20, 1920.

Main State Pomological Society, City Hall, Portland, Me., November 16-19, 1920.

Vermont State Horticultural Society, Rutland, Vt., November 17-19, 1920.

Peninsula Horticultural Society, Wilmington, Del., November 30-December 2, 1920.

Mississippi Valley Apple Growers' Association, Louisiana, Mo., November 22-28, 1920.

Virginia State Horticultural Society, Staunton, a., November 30-December 2, 1920.

December

Ohio Apple Show, Columbus, O., December 1-3, 1920.

American Pomological Society, Columbus, O., December 1-3, 1920.

Arkansas State Horticultural Society, meets in December at time and place to be announced.

Indiana State Horticultural Society, meets in December at time and place to be announced.

Texas State Horticultural Society, meets in lower Rio Grande valley in December at time and place to be announced.

New Jersey State Horticultural Society, Chalfonte Hotel, Atlantic City, December 5-8, 1920.

Missouri State Horticultural Society, Springfield, Mo., December 6-8, 1920.

Iowa State Horticultural Society, Des Moines, Ia., December 7-8, 1920.

Minnesota State Horticultural Society, Donaldson Store, Minneapolis, Minn., December 7-10, 1920.

Washington State Horticultural Association, Spokane, Wash., first week in December, 1920.

Connecticut Pomological Society, Hartford, Conn., December 15-16, 1920.

Illinois State Horticultural Society, Bloomington, Ill., December 15-17, 1920.

Kansas State Horticultural Society, Topeka, Kans., December 21-23, 1920.

January

New York State Horticultural Society, Rochester, N. Y., January 5-7, 1921.

Missouri Annual Apple Show and Farmers' Week, Columbia, Mo., January 17-21, 1921.

Montana Horticultural Society, Hamilton, Mont., January, 1921, date to be announced.

National Cannery Association, Baltimore, Md., January 17-21, 1921.

American Fruit & Vegetable Shippers' Association, Chicago, January 6-8, 1921.

South Dakota State Horticultural Society, Yankton, S. D., January 18-20, 1921.

Rhode Island State Horticultural Society, Providence, R. I., January 19, 1921.

Tennessee State Horticultural Society, Hermitage Hotel, Nashville, Tenn., January 25, 1921.

Tennessee State Nurserymen's Association, Hermitage Hotel, Nashville, Tenn., January 26, 1921.

Tennessee State Beekeepers' Association, Hermitage Hotel, Nashville, Tenn., January 27, 1921.

Western Fruit Jobbers' Association of America, Broadmoor Hotel, Colorado Springs, Colo., January 24-26, 1921.

February

Ohio State Horticultural Society, Columbus, O., February 1-2, 1921.

Sixth Annual Tractor Show, Ohio State Fair Grounds, Columbus, O., February 7-12, 1921.



This White Truck makes it possible for Mr. Winkler to sell in the best rather than the nearest market

White Truck Increases Profits of Illinois Fruit Grower

H. F. WINKLER, who owns an 80-acre fruit farm near Peoria, Illinois, and who specializes in melons, berries and grapes, is another grower who finds that a White Truck enables him to market his fruit at a greater profit.

"Before I owned my White, Peoria was the only market I had," says Mr. Winkler. "But now, whenever I find the Peoria market glutted at a time when I have fruit to move, I get in touch with other markets anywhere within a 40-mile radius, and by means of my White Truck I am able to haul my fruit to whatever market is offering the best prices."

"When I first bought a White, some of my neighbors who owned cheaper trucks thought I paid more for a truck than was necessary. But I have been able to show them the economy in my purchase, for my White has given more dependable and lower cost hauling, and will doubtlessly continue to do so for years after their cheaper trucks have worn out."

On your fruit farm you can afford to use a White Truck better than you can afford the less dependable service and higher operating cost of inferior equipment. Owners' records everywhere show that White Trucks do the most work for the least money.

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White Trucks

As low as \$19.50

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Crush and grind all the grains that grow; fine for hay or coarse for cattle feeding. Corn in husk, Head Malting, and all small grains. Strength, Durability and Service indicate from every line of these Mechanical Grinders. Simple but effective in adjustment.

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Send and the motor car. Don't wait. Write today!

BUSH MOTOR CO., Chicago, Ill., Dept. 77-28. Best Terms.

You will enjoy "The Luck of the Irish." First installment appears in this issue on page 18.

Some Phases of Pear Harvesting

(Continued from page 6)

of two months, and when taken storage at the end of that time, still hard and required practically same time in which to ripen as did Bartletts. He claims that specimens very carefully selected will keep longer.

Prof. Warren P. Tufts, of the University Farm, Davis, Cal., writes that average picking dates in four districts of California for the Bartlett are as follows: Sacramento, 20th; Vacaville, July 17th; Placer, August 2d; Tehachapi, August 10th.

These figures are for the 1919 season. The pear shipping season in California, states, extends from the 1st of July to the end of October. The Clairgeau Hardy grown on the Sacramento are not kept very long, and are about the time of the Bartletts. Hardy, however, has been shipped to America and the West Indies in good condition.

Mr. C. L. Robinson, District Horticultural Inspector of the Yakima District, has been making some careful observations and he states that in a general way, the Bartlett season extends from August 1st to 25th, and that Anjou, Comice and Bosc about September 1st to 15th; Winter Nellis, September 10th to 25th.

Under Yakima conditions he states they generally feel that the limit of season for Bartletts is about October 1st. Anjou, Comice and Bosc, January 1st; Winter Nellis, March 15th. However, he states that these varieties have kept much longer. Years ago, we thought we could keep pears very long, but more and more we are lengthening the season. Bartlett and Howell have kept under certain conditions until holidays, and Anjou, Bosc, Comice, and similar varieties beyond the holidays.

Prof. Oberholtzer of the University of California gives storage dates for certain varieties as follows, and this is in keeping with the more recent commercial findings on this subject: Bloodgood, October 5th; Clapp, October 10th; Hardy, October 10th; Howell, October 15th; Bartlett, December 1st; Bosc, December 20th; Clairgeau, December 20th; Comice, January 1st; Louise, January 1st; Danas Hovey, January 1st; Anjou, January 25th; Angouleme, February 1st; Glou Morceau, February 1st; Winter Bartlett, February 5th; Winter Nellis, February 10th; Barry, February 15th; Easter, February 20th.

Years should be better known. They are one of our most luscious fruits. Few people know many varieties, but better handling and storage of our fruit, and more efficient advertising, we could make the American public to eat a great many more pears.

The next decade is going to see a tremendous increase in the consumption of fall and winter varieties, and is only waiting for the proper steps to be taken to educate people to the real merit of the fruit.

TEACH BAKERS TO USE PRUNES

There is a good deal of the "show me" attitude in most people, and through the lack of adequate vision or reasoning power, it is necessary to show or prove by demonstration many of the newer things that come up from time to time in the commercial world. An item in point is being developed by the California Apricot and Pear Growers, Inc., in the training of a number of bakers in a San Francisco cooking school in the use of pears in bakery goods. These bakers will soon go on the road for the association for the purpose of demonstrating to the bakery trade some of the uses of pears in the preparation of bread, cakes and pastry of various kinds.

This is one item in the plans of the association for building new markets for pears, which will go far toward stabilizing conditions in the prune market and make it easier each year to market the increasingly larger crop. But it is less well known that the prune may be used in similar ways.

Bigger Loads, Quickly Hauled With a Federal

Haulage is a big item on the farm. The distances between fields and barns and between barns and market are always comparatively great.

Federal trucks are solving the haulage problems of farmers everywhere, because Federals are trucks of such wide range utility. In the field, in the wood lot, in the barn yard or on the road, Federal's dependable and economical service commends itself to the thoughtful business-farmer.

The nearest Federal dealer will be glad to study your haulage problem and recommend to you the type of body and the capacity that will most nearly meet your requirements.

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20c. BIRD POULTRY JOURNAL, Sept. 4, 1920, CHICAGO, ILL.

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The tremendous popularity of Hamilton Watches among railroad men is due to unfaltering accuracy and long life.



Regulations require that Conductor and Engineer compare time before the start of each run. That's what Engineer E. T. Reed and Conductor J. County, who together run the same Erie train, are shown doing. Both men carry Hamilton Watches, and both have a reputation for precise and punctual service.

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"The Railroad Timekeeper of America"



Aren't these the qualities you want in a watch? Time never was so precious on the farm as now. A Hamilton would help you divide up your day's work — would save minutes that quickly run into hours.

A Hamilton Watch makes an appropriate gift on any occasion — a splendid, lasting token of regard.

There's a model for everyone in the Hamilton line, with prices from \$40 to \$200. Hamilton movements alone, \$22 (in Canada \$27.00) and up. At your jeweler's.

Send for "The Timekeeper" — an interesting little book that tells about the manufacture and care of fine watches. The different Hamiltons are shown with prices.

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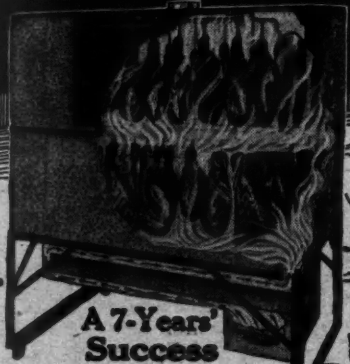
This is the same Smoke House used by Governor Cox of Ohio by big breeders and farmers all over the country. In use on Agricultural Experiment Farms, pictured in a leading article by Country Gentleman, and recommended by Farm Paper Publishers all over the land.

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A 7-Year Success

Thousands of farmers in the U. S. and foreign countries will tell you that the National Giant Smoke House saves half their meat bills — gives them better, sweeter meat, fish for their own table. The wonderful National Giant Smoke House is portable; can be operated indoors or outdoors. Made in 3 sizes. Runs on sawdust and coals and a little bark for seasoning. After smoking meats, use for store house. Fly and bug proof. Keeps meat without packing. Worth its price many times over for this storage feature alone. Contains valuable price-winning recipes for curing and smoking Hams, Bacon, Sausages and Fish at home. Gives full description of the original National Giant Smoke House. Quotes prices and gives other details. Write for it today.

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Some Good New Books

Directory of County Agents, Farm Bureaus and Their Co-Workers. Published by William Grant Wilson, 51 Chestnut St., Cambridge, Mass.

This is a directory of all county agents, home demonstration agents and others who are employed under the Smith-Lever extension act in the United States, and of all similar workers in Canada. To the original directory, supplements are issued from time to time in which revisions of names and addresses are made, in order that the volume may be kept up to date, and therefore of most use to those who are desirous of keeping in touch with these workers. This volume is the most pretentious thing of the kind available.

Joan of the Island, by Ralph Henry Barbour and H. P. Holt. Published by Small, Maynard & Co., Boston. Price by mail, \$1.90.

The glamour of the romantic South Sea spells fascination for the reader of the charmed pages of this alluring and exciting tale. In a scene laid in the South Sea Islands, a center of a net of intrigue where pearl poachers wage desperate battle, there unfolds a series of striking adventures all subservient to an appealing romance.

FIRM DOES BIG BUSINESS

The American Fruit Growers, Inc., has just made public the figures for its first 13 months of operation, ending June 30, 1920. Gross sales were \$34,487,000 and surplus earnings after payment of all interest charges, federal taxes for 1919 and preferred stock dividends, were \$694,227, equal to approximately \$13 per share on the outstanding common stock. During that period the company handled 31,280 cars of fruits and vegetables made up as follows: potatoes, 6,120 cars; citrus fruits, 5,262 cars; cantaloupes, 4,748 cars; apples, 2,963 cars; other, 12,187 cars.

The company maintains extensive jobbing offices in New York, Pittsburgh, Chicago and St. Louis and carlot sales offices in the other principal markets of the country. In addition to its marketing operations the company owns and operates more than 8,000 acres of apple and peach orchards, citrus groves and vegetable farms located in the best commercial districts and representing an investment of \$5,600,000. The company has outstanding \$5,202,800 7 per cent cumulative convertible preferred stock, 53,481 shares of common stock of no par value and \$1,000,000 7 per cent convertible notes due 1922-1926.

NEW HAMPSHIRE'S APPLE TREES

In the interval between 1909 and 1919 the apple orchards of New Hampshire lost a total of 519,755 trees, according to the figures just made public by the Bureau of the Census. In 1909 New Hampshire had 1,240,885 apple trees, while in 1919 but 721,130 trees were in her orchards. But the values of the crops in those two years is quite the reverse, amounting to a gain of 231.8 per cent. The valuation of the orchard fruits and grapes of the state in 1909 amounted to \$730,703 while last year the valuation was placed at \$2,420,837, with a yield in bushels of 1,103,424 in 1909 and 1,364,001 last season. The production of strawberries in 1919 amounted to 489,774 quarts, of raspberries 130,991 quarts and of peaches, 39,019 bushels.

Along with the decrease in the number of apples in New Hampshire, the census bureau states there has been a decrease of 24.1 per cent in the number of farms in the state with a decrease of 19.9 per cent in the acreage of farms and 24.4 per cent in the improved acreage in farms. From these figures it would appear that the back-to-the-farm movement deserves some energetic pushing in New Hampshire. And the comparative values of the apple crop in the two census years should afford some good talking points for those who would encourage apple growing in the Granite State.

The average number of pupils attending a city high school is 653, while that of the average rural high school is 59.

When you think of Spraying Material

Keep in mind

HENRY HEIL CHEMICAL CO.

FOR

Arsonite of Lead, Paste... 100-lb. bags... 100-lb. bags...
Lime-Sulphur Solution... 5-gal. cans... 1-gal. cans...

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most long; outlast three ordinary roofs. No repairs. Guaranteed rot, fire, rust, lightning or over made.

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William Grogan, the red-headed Irishman, "The Luck of the Irish," will give you heart right from the start. Turn to page 100.

The Orchard Home

A Section for Orchard Women and the Children
 Edited by Mary Lee Adams

Have You Qualified?

THE time for casting ballots in the forthcoming presidential election is drawing near, and as women in practically every state will be enabled to vote under the 19th amendment, they should not postpone qualifying as voters. We urge our orchard women to do so in good time, and as they represent the highest type of the great farm family which is truly called the backbone of the country, we make no doubt that their vote will be intelligent and conscientious.

Whether regarded as a valuable prerogative or an undesired responsibility, the ballot is now placed in the hands of women. If you think of it as an instrument with which to work for your country, you will need nothing beyond a reminder not to put off qualifying. But suppose you look at it merely as a responsibility that you did not seek and that has been forced upon you? Does this alter your duty in the matter?

We think not. Life is full of unwelcome responsibilities and only through accepting them bravely do men and women attain their full growth. Without any responsibility we would remain children always even though we lived to be a hundred years old. It is no excuse to say, "I did not seek the ballot and therefore I choose to disregard it." You must consider that some woman, whose views are not the same as yours, is going to exercise her right and that your vote is necessary to offset hers.

To militant and anti alike comes the call of citizenship. No one can deny that both were good fighters in the cause they thought right, and a good soldier is the first to accept defeat in a generous spirit and to get to work in a constructive way, rather than in the wasteful manner that marks all conflict whether of arms or opinions. So to anti and suffragist we issue the call to qualify.

A Cozy Living Room

IN NOT a few ways the winter season increases the housekeeper's problems. One of these is how to keep the family cheerful indoors. Through the summer months most of the daylight hours were spent in the open air. The household was busy with outdoor occupations or recreations, and even the restful evenings were spent on the porches or the lawn.

It is different now, for when we are not moving about briskly we must be under shelter and in a heated atmosphere. The orchard woman who found every one easy to please in the open air now has to consider the best means for making all comfortable and happy indoors. The living room, which has so fortunately supplanted the old-fashioned parlor, should now be the center of family life. Its furnishings should

suggest good cheer and warmth. Heavier curtains and rugs, brighter lights, books ranged around the walls and lying on the big table, add to its charm. If possible, arrange the lights so that every one may be able to read without straining the eyes.

By all means have something to suit the taste of each member of the home circle in the way of reading matter. Winter is the time for planting the seed of knowledge in the mind just as spring is the time for planting seeds in the earth. Many fruit farmers have too much rush work during the summer months to find time for the wider knowledge that books afford. A few first rate magazines suitable to grown-ups and not forgetting the kiddies, add greatly to the cheer of long winter evenings.

Easy chairs are restful when one can sit as much as an hour without jumping up to do some outdoor chore. If the summer sun has dimmed the gloss of your painted furniture, repaint it and put on new and more substantial coverings. It may be much prettier than when quite new. Have a window box of bright flowers and a few hanging baskets or wall vases from which some green or glowing plant may droop.

Eat Fruit for Health

AN ABUNDANCE of fresh fruit in the diet is the greatest safeguard against disease. So say the knowing ones, and it is seldom that a physician's prescription is so agreeable to take. Fruit growers are in a fortunate position as regards carrying it out. Fruit may not bring the grower an extravagant price, but it certainly does cost the consumer a regrettable sum when purchased from the retailer.

The fruit grower's family, on the other hand, may eat all that is good for them without paying for it and without materially reducing the money return from the crop. Our faith in apples has been stimulated by the oft repeated line "an apple a day," but it is not apples alone that protect the body from ailments, and it should be the duty as well as the joy of every fruit grower to have a space allotted for the home orchard where a larger variety of fruits can be grown than would be advisable in the commercial orchard.

Now that we have learned the secret of everbearing berries and of late fall peaches, as well as how to store our apples, we ought to have fresh fruit at command pretty nearly every day of the year. When the home supply fails, remember there are oranges, grape fruit, bananas and other tropical and semitropical fruits to fill in the interval and guard us against bodily ills.

Experiments show that the disease-resisting qualities of fresh fruit are lessened by cooking, and the longer the cooking the less the disease resistance. Eating the juice

with such fruits as are canned at home, helps their beneficial effect, but above all eat an abundance of fresh fruit. There is no way to assure this except to have a home orchard. In it should be planted at least a few specimens of each of the savory fruits that are suited to grow therein.

The Good Old Days

CHANGE affects persons differently. Youth is generally fairly silly about it. Some of us love it and some hate it. Age is often as unreasonable in its objections to any break in the old order. "How," age asks, "can any sane human being put up with the distracted fashions in dress of the present day?" That's what Adam said to Eve when the fig leaf went out of style, and yet the most passionate advocate of the good old days would hardly advise a resumption of that simple mode.

Not infrequently we hear that the country is going to the dogs, that ideals are far lower than formerly, that women dress in a manner that proves them devoid of modesty. But while fashions change in government, in dress, in illnesses even, the very best in all times has a permanence. We may stalk abroad in garments that make men and angels weep, but we still admire the classical draperies of the ancient noble Greek statue. Jazz may torment or tickle us, but the masterpieces of music are still beloved. We read the verse of futurists, but still the Bible maintains its position as the most wonderful piece of literature ever penned.

Men at heart are not greatly different though outer forms are unrecognizable, and we have faith to believe that nothing of true worth shall perish from the earth.

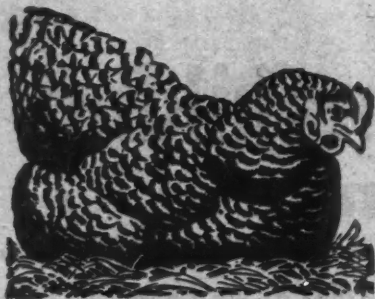
Children Like Simple Toys

NOVEMBER, and already the faint far-off rumblings of Christmas activities are heard. The "do your shopping early" sign rears its horrid crest above the erstwhile peaceful store counter. At its warning menace we feel the accustomed sinking of the heart that follows any realized necessity for outlay, because there's no use pretending that money isn't tight. It's tight, and we are told that we ought to be thankful that those in whose hands lie the financial destinies of the country, drew the rein sharply before we absolutely ran away to wreck and ruin.

No doubt extravagance was running wild, and though the present stringency is cramping to many, it is probably wholesome for most of us. But still there's Christmas coming, and the little ones all excitement in a few weeks as to what their stockings will hold. You wouldn't mind it but for the children, you say, and that's sensible.

50 Eggs a Day

Yes—fifty a day. How? Read the letter below.



"'More Eggs' Tonic is a Godsend," writes Mrs. Myrtle Lee, of Boston, Ky. She adds, "I was only getting 12 eggs a day and now I get 50." Give your hens a few cents' worth of "More Eggs", the wonderful egg producer, and you will be amazed and delighted with results.

\$1.00 Package FREE

If you wish to try this great profit maker, simply write a postcard or letter to E. J. Reeder, the poultry expert, 5946 Reeder Bldg., Kansas City, Mo., and ask for his special free package \$1.00 offer. Don't send any money. Mr. Reeder will send you two \$1.00 packages of "More Eggs." You pay the postman upon delivery only \$1.00, the price of just one package, the other package being free. The Million Dollar Merchants Bank of Kansas City, Mo., guarantees if you are not absolutely satisfied your dollar will be returned at any time, within 30 days—on request. No risk to you. Write today for this special free offer.

Poultry Raisers Everywhere Tell Wonderful Results of "More Eggs"

15 hens—310 Eggs
I used "More Eggs" Tonic, and in the month of January, from 15 hens, I got 310 eggs. MRS. C. R. STOUGHTON, Turners Falls, Mass.

"More Eggs" Paid the Pastor
I can't express in words how much I have been benefited by "More Eggs." I have paid my debts, clothed the children in new dresses, and that is not all—I paid my pastor his dues. I sold 45% dozen eggs last week, set 4 dozen, ate some, and had 1% dozen left. MRS. LENA McBRON, Woodbury, Tenn.

1200 Eggs from 29 Hens
The "More Eggs" Tonic did wonders for me. I had 20 hens when I got the tonic and was getting five or six eggs a day. April 1st I had over 1200 eggs. I never saw the equal. EDW. MEKKER, Pontiac, Mich.

160 hens—1500 Eggs
I have fed two boxes of "More Eggs" to my hens and I think they have broken the egg record. I have 160 White Leghorns and in exactly 31 days I got 125 dozen eggs. MRS. H. M. PATTON, Waverly, Mo.

\$200 Worth of Eggs from 44 Hens
I never used "More Eggs" Tonic until last December, then just used one \$1.00 package and have sold over \$200.00 worth of eggs from forty-four hens. "More Eggs" Tonic did it. A. G. THODE, Sterling, Kans., R. No. 3, Box 47.

1368 Eggs After 1 Package
Last fall I bought a box of your "More Eggs" Tonic and would like to have you know the result. From January 1st to July 1st, my hens laid 1368 eggs. A. E. WHITE, Scranton, Pa.

Send No Money

Don't send any money; just fill in and mail coupon. You will be sent, immediately, two \$1.00 packages of "More Eggs." Pay the postman upon delivery only \$1.00, the extra package being FREE. Don't wait—take advantage of this free offer TODAY! Reap the BIG profits "MORE EGGS" will make for you. Have plenty of eggs to sell when the price is highest. Send today!

\$1 Package FREE

E. J. Reeder, Poultry Expert, 5946 Reeder Bldg., Kansas City, Mo.

Dear Mr. Reeder—I accept your offer. Send me the two \$1.00 packages of Reeder's "More Eggs" for which I agree to pay the postman \$1.00 when he brings me the two packages. You agree to refund me \$1.00 at any time within 30 days, if both of them packages do not prove satisfactory in every way.

Name.....

Address.....

Playing Square

By E. N. Cable, Ohio

GOOD health and strong bodies are a precious heritage. Once upon a time there were folks who claimed to believe that it was nobody's business if they abused their bodies and lost their health, arguing that these were their own, and nobody else need be concerned about the matter.

But there are few who would make such a claim today and, somehow, we are coming more and more to realize the wisdom of saving health and strength. Probably the wisdom of this has come with increased means for preserving the health and strength of those who have to work and, maybe, risk those assets in their daily round of toil.

The first measures for health betterment were employed in the best organized communities—the cities and towns. It was easier for people in a mass to secure the means to better health, sanitary laws, labor-saving equipment, modern conveniences and other features that make the great body of humanity healthier—and happier. Of course, it is necessary for those who live in crowded cities and towns to have health laws and regulations, such as folks in the country have long been able to get along without. But that doesn't argue that country folks wouldn't have been better off if they could have had, long ago, the modern conditions and equipment which assure healthful conditions for city folks.

There has been a great deal written about conditions of living in the country. More will be written and more will be said, doubtless, through months to come. There is more to be said; for it is becoming easier, right along, to improve those conditions and a general demand for pleasanter and more convenient surroundings seems to be abroad in the land.

Most of the farm home improvements, as relates to increased comfort, convenience, labor-saving and sanitation are made possible or are easier of enjoyment through the aid of electricity. Electricity can be had very easily for the farm home, now-a-days, as I have stated repeatedly in these columns. Some of us, perhaps, can utilize convenient water power or take our current from a high tension line. Any of the rest of us can employ one of the modern, individual electric plants and provide for our families all the safety measures that modern living requires.

Automatic Water Pump

Everybody knows the menace of the outdoor toilet and of the exposure incident to its use and to carrying water for household purposes. Everybody should know about the automatic pressure pumps that operate with electricity and pump all the water needed for any purpose whatever.

These pump the water necessary to operate the sanitary, water-flushed toilet. They furnish water for a modern bathtub and lavatory, for faucets at the kitchen sink, for throwing water through a hose, for the horse troughs at the barn, for all the usual needs for water about the farm premises.

They save a lot of labor that goes with getting water in the ordinary way. Better than that, they protect the health of the farm family. Is it fair, do you think, for present-day folks to risk their health and waste their strength when modern invention offers electricity to make living conditions safe and healthful?

Take the matter of electric power. There are so many places where it can be used on the farm to save time, labor and the strength of some one of the family. A man just told me that with a milking machine driven by his electric plant, he is milking his 30 cows in 45 minutes. This was with the aid of a 14-year-old boy. The same job, done by hand, would mean over four hours milking for one man. Think of the time and labor saved in this instance by the use of modern equipment. Is it fair for a man to burden himself with four hours of labor like milking a lot of cows when he can employ this modern, electric-motor-driven appliance and just watch those cows being milked, six at a time, as he does? Surely human strength is too precious to be dissipated in such trying labor when there is a practical, profitable way out.

Christmas Suggestions

YOU cannot go wrong when giving magazines as Christmas presents—with each number during the year you are thought of by the person to whom you made the gift. Good, clean literature is always appreciated.

Why not mail your order today and have the subscriptions start with Christmas numbers?

If you have not renewed your own subscription, now is the time to act.

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Capper's Farmer	Monthly	Regular price, all four, \$2.25
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AMERICAN FRUIT GROWER	"	

Suggestion No. 6

The Pathfinder	Weekly	Regular price, all three, \$2.50
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Suggestion No. 7

Today's Housewife	Monthly	Regular price, all four, \$2.75
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Suggestion No. 8

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The Pathfinder	"	SPECIAL TO YOU
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BEAUTIFYING THE HOME AND GROUNDS

By MARY LEE ADAMS

Bringing the Garden Indoors

THE FALL of the year would be the favorite season of many persons but for the knowledge that autumn is ringing the knell of the outdoor loveliness around us. As September closes the door upon summer, the garden borders of those who have planted wisely overflow with a wealth of bloom beyond anything spring herself can show. Such tall, brilliant masses of color as are made by dahlias and marigolds, cosmos, hardy hydrangeas, scarlet salvia and the endless sturdy autumn flowers, not forgetting the roses which are now giving their second and best (by no means their second-best) show of choice bloom.

Beyond the garden limits, goldenrod, purple asters, lobelias blue and crimson, store gentians and all the tall golden company of yellow roadside plants riot in a profusion of color. The very weeds take on the beauty of bloom and make a delight of the highways and byways. Our orchard homes are made gay by every member of the family who goes outside and cannot resist bringing in an armful of the lavish wealth so temptingly displayed and so charming when set about the house in large vases and pottery jars.

House Plants for All

The thought of window boxes brings visions of potted geraniums, primroses, bulbs in great variety, the cool, green company of ferns and the large assortment of palms and foliage plants. There are so many pretty things to grow in pots during the winter that it is hard to make a selection.

As a rule we should first consider the fitness of the plants to the surroundings we are able to furnish. Do not choose the particularly sun-loving plants if no direct sunshine falls through the window where they are to be placed. Rather let ferns, which do not require so much light, take their place. Another thought should be given to the color of the coming blooms. The appearance of a room hung in soft rose would not be improved by a mass of scarlet geraniums. There is sufficient variety to offer a good choice of colors. Plan a succession of bloom for all winter.

General Rules for Care

Remember that two vital demands of all plants are light and water. Good soil and drainage must supplement these, for if you allow roots to stand in stagnant water you are condemning the plant to slow death. Ornamental jardiniere are looked at askance by flower lovers because they have no drainage and most people forget to examine them frequently to make sure that the pot which contains the plant is not left standing in a pool. Even at best, the constant handling in order to empty the jardiniere, is far from acceptable to the plant. Really a nice porous pot looks as well or better than most jardiniere. It should stand in a tray or saucer of pebbles through which the pot may drain. If the warm, red sides of the flowerpot are objected to, they may be camouflaged by some concealing moss.

Constant sprinkling is not so beneficial as abundant watering at suitable intervals. Every effort should be made to maintain a moist atmosphere in the room, and this will be as favorable to the plants as it is to the people who breathe it, and for much the same reason. You know how dry and stiff the skin of those who live in hot, dry climates become. The foliage of a plant serves it as lungs do the human beings. When this foliage is overlaid with dust and soot the poor little plant stifles. Keep it clean, but pray do not imitate those who mistakenly wipe off the leaves of their palms with oil to make them bright and shiny.

It is the habit of some to move their house plants constantly from place to place under the impression that plants, like people, crave a change of air. Authorities tell us that a plant becomes accustomed to a certain position and exposure and adapts itself to them. When moved it is thrown out of balance and its habits must be formed over again at the cost of growth. Even the turning of window pots to keep the best flowering side always facing the room, will discourage the bravest bloomer.

Small Pots Best

It is not unnatural for the true flower lover to feel such concern for the comfort of the plant as to make the mistake of setting it in a pot too roomy for the best flowering condition. To be sure the plant will not resent having space for growth and will make good use of it by gaining size, but this will be at the expense of blossoms, and the best flowering plants will be found in relatively small pots.

Plant natives of the northern regions have learned through long generations of battling with cold, dark winter days, to drop their leaves and go to rest during this trying season, and so no matter what artificial conditions we may supply we cannot induce most plants to flower freely during the shortest and coldest days of December and January. The satisfactory conduct of bulbs in this respect is due to their habit of preparing next season's bloom during the previous growing season. Their ready-to-bloom flowers come obligingly forward whenever called upon, provided they have first been given a period of cool darkness in which to rest.

Another agreeable trait of many bulbs, due to this same thrifty forehanded habit of preparedness, is their willingness to bloom with no other nourishment than water. All of us are familiar with the pretty bowls set with pebbles in which the bulbs are half buried, their roots being in constant contact with water and their heads crowned with most flourishing bunches of flowers.

Geraniums Are Popular

Geraniums are a great favorite among house plants and many persons imagine that they are so hardy as to have few requirements. How much disappointment has resulted from a misunderstanding of the needs of this peculiarly sun-loving plant. Often they are placed in shady positions where they absolutely cannot bloom. They love the sun and they must have it, or you need look for no reward for them.

Some General Rules

As we have not space to dwell on the various delightful house plants, let us go over the essential requirements of all. First—plenty of sunlight; some modification being made as to the degree which is "plenty," for this varies as between ferns and flowers.

Second—abundance of water. Not a constant sprinkling, but a good soaking at proper intervals. Good drainage so that the roots of the plant need never stand in stagnant water.

A well-balanced soil that contains the elements necessary for the health of such things as grow in the earth.

Air that is not very dry. A moist air is very encouraging to plants and people in our artificially heated rooms.

Last, keep a sharp lookout for injurious insects so that they may be checked by the right treatment before they gain the upper hand. It will be easy to carry this out by applying to a good nursery man or to your experienced neighbor for special information as to what spray, etc., to use for certain pests.

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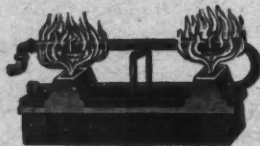
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Full size white enamel tub, nickel-plated 22-gal. tank. Closes up in space 8 ft. square. On casters—roll it anywhere. Heater attachment for kerosene, gasolene or gas. Water heats quickly, waste drains through hose attached. Quick, simple, guaranteed. Write for catalog and price. **Ro-San Mfg. Co.**
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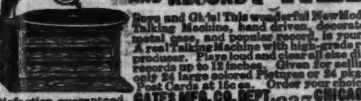
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Send Today and get our new big bargain book filled with beautiful pictures of our sanitary Feather Beds and Pillows. Or direct factory to home prices will open your eyes. Send today for this free book and sample of our sanitary Feather Bed. **AMERICAN FEATHER & PILLOW COMPANY** Box 47, Nashville, Tenn.



We will give \$1.00 each for original, helpful suggestions that will save time, money or strength in all sorts of housework. Unaccepted manuscripts will not be returned, but will be promptly destroyed. Address "Housekeepers' Exchange," AMERICAN FRUIT GROWER, Chicago.

To serve a company of 75 furnish three layer chocolate cakes, three layer lemon cakes, three Dolly Varden layer cakes, five loaf cakes, seven pounds of meat for pressed meat. Allow two rolls a piece, six dishes of salad, two pounds of coffee, four gallons of ice cream, pickles, olives and jelly. **J. B., New York.**

Put a keg hoop on the kitchen range and fill with ashes. Set the big kettle of apple butter on this to cook. It will require little stirring and will not scorch. This applies to all fruit butters. **S. H., Colorado.**

If a boiled custard curdles in cooking, remove quickly from the fire and beat vigorously with an egg beater. It will return to a smooth condition. **F. L., Rhode Island.**

If a little water be added to the gasoline used for cleaning, and kept constantly stirred, no ring will be left around the spot cleaned. **D. E. M., Minnesota.**

After taking a cake from the oven, if you wish to be sure it will not stick set it on a damp cloth for a few minutes. **E. S., New York.**

When company comes to stay and closet space is limited, try putting up a temporary pole or board either in the closet or out. Provide with sufficient coat and skirt hangers. **A. S. B., Kansas.**

If a piece of oilcloth is cut to fit the table of a child's high chair and tacked round the edges, the table is easily cleaned. **W. A. B., Illinois.**

The scorched taste of food that has boiled dry while cooking, may be removed by setting the kettle in a pan of

cold water for a few minutes and then emptying the contents into a clean cooking vessel before finishing the cooking. Never pour water on the burned food while in the hot kettle. **H. J., New York.**

Hardwood floors may be kept looking new by adding a little milk to the water used in scrubbing them. If hot milk is run over a freshly cleaned floor it will look better than if floor oil is used. One pint of milk will be enough for 200 sq. ft. of floor space. **J. J. I., Virginia.**

Butter or grease the pan in which candy is to be cooked, for an inch or two down from the top. The boiling candy will never rise above the buttered line. **V. J., Missouri.**

A teaspoon of glycerine in a pint of common glue makes the best cement for fastening anything (paper, wood or leather) to metal. **J. C., Ohio.**

The yolk of a waterglass egg adheres slightly to the large end. It can be pulled whole when separating yolks from whites by holding the large end down to serve as a cup for the yolk. **W. S., Rhode Island.**

To make old hair ribbons look new wash them and before they are thoroughly dry, lay them between newspaper and press with a hot iron. **A. C. O., New Jersey.**

To keep linoleum looking well and easy to clean, apply a coat of varnish twice a year and use a soft brush to clean. **M. K., Wisconsin.**

The best apron to use for dishwashing and canning, is one cut out of oilcloth in a single piece with a bib effect. Fasten behind by tapes sewed to the corners of the apron and by a strap to slip over the head. **C. R., Oklahoma.**

If you wish to make some extra money, write to the Circulation Department of American Fruit Grower, State-Lake Bldg., Chicago, Ill.



Roast Turkey a la Creole
Clean and prepare the turkey as usual and when ready to cook, lard the breast with numerous thin strips of bacon fastened on with toothpicks. Place in a hot oven to sear. Then turn the bird on its breast. The bird should be turned on its breast three-quarters of the time it is cooking—say the first half of the time and the last quarter. Baste every 10 minutes and dredge occasionally with flour. Do not season until the bird is three-quarters cooked, then season and turn on its breast to brown.

Dressing for Turkey
1 pint stale bread crumbs
1 teaspoon poultry seasoning
1 large minced onion
2 tablespoons bacon fat
1 large minced onion
1 teaspoon salt

Rub all together into a mass and fill the turkey when it is three-quarters cooked, with the mixture.

Cranberry Jelly
1 quart cranberries
1 cup water
1 pinch salt
2 cups sugar

Cook berries with water until soft, then put through a colander. Boil again for three minutes and add the sugar and salt. Stir until sugar is dissolved and allow to boil for 10 more minutes. Rinse a mold in cold water and pour in the hot liquid. Set aside to cool. Custard cups will an-

swer very well in place of a regular mold.

Oyster Fritters
2 dozen small oysters
2 teaspoons baking powder
1 teaspoon paprika
1 1/2 teaspoons salt
2 cups flour
1 tablespoon grated onion
3 teaspoons minced parsley
1 well-beaten egg
1 1/4 cups oyster liquid and milk

Chop the oysters fine. Add oyster liquid to the oyster liquid to make a cup and one quarter. Pour into bowl and add the other ingredients. Beat well together and fry in hot fat making fritters the desired size.

French Fried Sweet Potatoes
Boil good-sized sweet potatoes 10 minutes. Cool under faucet. Peel and slice lengthways. Fry in hot fat until golden brown.

Caramel Pudding
2 cups brown sugar
1 tablespoon butter
1 grated nutmeg
4 tablespoons water
3 cups apple sauce
2 cups bread crumbs

Cook together one cup of sugar with the water and butter until it caramelizes. Pour into a baking dish and turn out. Dish is thoroughly coated. Beat together the apple sauce, remaining sugar, bread crumbs and nutmeg. Pour into coated baking dish. Bake in a slow oven for 40 minutes. Turn on a platter and serve with caramel sauce.



36-inch material. Gingham, seersucker, lawn, linen, serge, gabardine, velveteen and Jersey cloth are good for this style.

3369. A Unique and Stylish Design.—It is cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 6 1/4 yards of 36-inch material. The width of the skirt at the lower edge is about 1 1/4 yards. Braid and embroidery stitches is here used for the decoration on serge. The design may be carried out on velvet or silk. Such materials as duvetyn, broadcloth, tricotine, faille and crepe de meteor are fine for this model.

3396. A Becoming Frock for a Little Miss.—It is cut in 4 sizes: 2, 4, 6 and 8 years. A 6-year size will require 3 1/4 yards of 27-inch material. A new feature of this model is the bell sleeve. Gingham, seersucker, percale, galatea, linen, silk, serge, plaid and check suitings are good for this design.

CATALOGUE NOTICE

Send 15c in silver or stamps for our Up-To-Date Fall and Winter 1920-1921 Catalogue, containing over 500 designs of Ladies', Misses' and Children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable to the home dressmaker.

3364. A Youthful Popular Style.—It is cut in 3 sizes: 16, 18 and 20 years. Size 18 will require 5 yards of 27-inch material. Serge, duvetyn, tricotine, velveteen, satin, taffeta and wool mixtures, likewise linen and wash fabrics are good for this model. The closing is effected at the side under the front panel. This dress measures about 1 1/4 yards at the foot.

3365. A Comfortable Suit for the Small Boy.—It is cut in 4 sizes: 3, 4, 5 and 6 years. A 4-year size will require 1 1/4 yards of 37-inch material for the blouse, and 1 1/4 yards for the trousers. If preferred, blouse may be made of material different from that of the trousers. Linen, drill, cambric, madras, pongee, khaki and flannel are good for the blouse, with the same materials for the trousers, or serge, mixtures, cheviot, corduroy and galatea.

3368. A Becoming Dress for the Growing Girl.—It is cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require 4 1/4 yards of

Send all orders to AMERICAN FRUIT GROWER, Pattern Dept., CHICAGO

ORDER BLANK FOR PATTERN
Price 15c Each

PATTERN DEPT.,
AMERICAN FRUIT GROWER, State-Lake Bldg., Chicago.

Enclosed find _____ cents for which send me the following:

Pattern No. _____ Size _____ Pattern No. _____ Size _____

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Name _____

Address _____

Postoffice _____ State _____

Be sure to give the pattern number and the correct size.



Make This Test

See how teeth glisten then

This ten-day test costs nothing. To millions it has brought a new era in teeth cleaning. This is to urge that you try this method. Then let your own teeth show you what it means to you and yours.

To fight the film

The object is to fight the film which causes most tooth troubles. Film is that viscous coat you feel. It clings to teeth, enters crevices and stays. The old methods of brushing do not end it. So, despite all care, tooth troubles have been constantly increasing.

It is the film-coat that discolors, not the teeth. And nearly all teeth brushed in old ways are coated more or less.

Film is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Millions of germs breed in it. They, with tartar, are the chief cause of pyorrhea. And that disease has become alarming in extent.

A daily combatant

Dental science has now found ways to daily combat this film. For five years the methods have been carefully watched and proved. Now leading dentists everywhere advise them.

These methods are embodied in a dentifrice called Pepsodent. Millions now know it and employ it. Wherever you look the results are seen in glistening teeth today.

Acts in five ways

One ingredient in Pepsodent is pepsin. Another multiplies the starch digester in the saliva to digest starch deposits that cling. The alkalinity of the saliva is multiplied also. That to neutralize the acids which cause tooth decay.

Two factors directly attack the film. One of them keeps teeth so highly polished that film cannot easily adhere.

With every application, Pepsodent

combats the teeth's great enemies in new and efficient ways. To millions it is bringing cleaner, safer, whiter teeth.

Send the coupon for a 10-Day Tube. Note how clean the teeth feel after using. Mark the absence of the viscous film. See how teeth whiten as the film-coats disappear.

This test will be a revelation. Make it now. Cut out the coupon so you won't forget.

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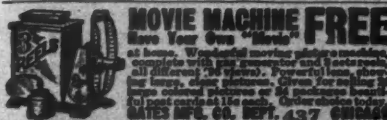
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A scientific film combatant combined with two other modern requisites. Now advised by leading dentists everywhere and supplied by all druggists in large tubes.

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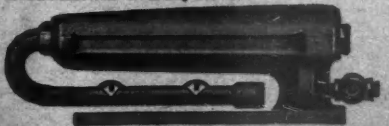
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taking orders for New Kerosene Burner. Makes any stove a gas stove. Burns kerosene (coal oil). Cheapest fuel known. Fits any stove.



\$40 a Week for Taking Only 3 Orders a Day
No experience necessary. No capital required. Work full or spare time. Easy to get orders on account of high price of coal. Get started at once. Big season now on. Write for demonstrating sample.
Thomas Mfg. Co. 5165 Dayton, Ohio

**Extra: "You tell 'em splinter,
you're a chip off the old block!"**

OLD PAL PETE:

Chicago,

Wednesday.

This is a P. S. to the letter I wrote you on the buzzing Limited. Kid, for a fact, I'm hitting 13 on making up Camel advertisements. And, I'll say it right here! Porter, give us the lights!

Just skimmed another swell Camel fact! Stop this: Guess I've smoked a million Camels! Pete, they never tired my taste yet!!!! And, old socks, put Camels to the test! Then you'll wise up that Camels leave no unpleasant cigaretty aftertaste nor unpleasant cigaretty odor!

That's some smoke news, I'll say, when you been trying to fuss the "straight" brands! And, old shoe, you ought to know, they gave you a lacing!

What makes a dent on my disposition is that while Camels are the mildest cigarette and the mellowest cigarette any man can buy they've got all the "body" you ever heard tell of!

Why Pete, I've got as many new selling ideas about Camels as there are hairs on a purr-kitty's tail!

Drop your old lamps down here,—how's that for blazing the joy Camels pass out!

Me for more of 'em

Shorty.

—"The Camel Kid!"

Camel

Classified Advertisements

POSITIONS AND HELP WANTED

WANTED—RELIABLE MAN TO ACT AS DISTRICT superintendent to book orders for fruit and ornamental trees, roses and shrubbery and engage sub-agents; exclusive territory, pay weekly. Apply at once, C. H. Weeks Nursery Co., Newark, New York.

WE PAY \$36 A WEEK AND EXPENSES AND GIVE a Ford auto to men to introduce poultry and stock compounds. Imperial Co., D90, Parsons, Kan.

WIDE-AWAKE MAN TO TAKE CHARGE OF OUR local trade. \$5 to \$8 a day ready. No experience required; pay starts at once. Write today. American Products Co., 2170 American Bldg., Cincinnati, O.

RAILWAY TRAFFIC INSPECTORS EARN FROM \$110 to \$200 per month and expenses. Travel if desired. Unlimited advancement. No age limit. Write for Booklet CM 84, Standard Business Training Institute, Buffalo, N. Y.

HUNDREDS RAILWAY MAIL CLERKS WANTED by government. Men-women over 17. \$135-\$300 month. Permanent. Last positions free. Write immediately. Franklin Institute, Dept. D115, Rochester, N. Y.

WANTED—MEN TO REPRESENT US WHERE WE have open territory in the states of Mich., Ohio, Ind., Ill., Wis., Iowa, Pa., and New York. Must be able to furnish reference. Greening's Big Nurseries, Monroe, Mich., 206 So. Monroe St.

REAL ESTATE FOR SALE

FOR SALE—TEN AND ONE-HALF ACRES OF COM- mercial orchard, lots 9 and 10, block 87, Lewiston, Oregon. Seven acres in seven-year-old apple trees, selected commercial varieties; three and one-half acres in cherries. In good condition; ideally situated near paved road; centralized school, church, and six miles from Lewiston, Idaho. Pipe line irrigation, fully equipped, \$8,500. Discount for cash. David Olson, Kent, Ohio.

FOR SALE—FINE 10-ACRE ORCHARD, PEARS AND apples in beautiful Hood River. Yielded 40 per cent of asking price last year, better this. Price \$10,500. Ill health cause for selling. Address L. F. Henderson, Hood River, Oregon.

A BEARING APPLE ORCHARD WITH \$6,000 IN- come. In unexcelled climate in the United States. Good market. Henry P. Corvick, Saluda, N. C.

FOR SALE—FOUR HUNDRED ACRES FRUIT lands, North Alabama. Early apples, small fruits, grow perfection. Opportunity man with capital to increase fortune. Railway through property. Chas. W. Ewing, Boaz, Ala., Route 8.

60-ACRE GROVE, BEARING TREES 2,540. HALF grapefruit, half oranges, Valencia and pineapple. 340 tangerines, 5 years old, 600 young oranges 2 to 4 years, 3-room dwelling, outhouse, barn, shed, located at railway station and on asphalt road, beautiful site for home, bargain for man who wants large property. Price \$80,000, cash \$40,000, balance 1-2-3 years. W. L. Law, Bartow, Fla.

WE HAVE MANY FINE PAVING GROVES AT Winter Haven, Florence, Vero, Lake Wales, Lake McLeod, Lake Wales, Frost Proof Lake Alfred, etc. Write or call on us and we will give description. W. L. Law, Bartow, Fla.

60-ACRE TRACT, GROVE 6 ACRES ORANGES, 4 acres tangerines, 21 acres grapefruit, dwelling, barn and outhouses, two miles, farm implements, beautiful 4-acre lake on property and lakes adjoining, beautiful building site, shrubbery and trees prettily arranged, located within 1-2 miles of R. R. station. Price \$40,000, Terms \$20,000 cash, \$20,000 year until paid for at 6 per cent. W. L. Law, Bartow, Fla.

FARMING PLOTS IN MICHIGAN'S FRUIT BELT. Hardwood land at \$15 to \$25 per acre in tracts of 10 to 160 acres. Get land for poultry, vegetables, fruit. Be independent. Near towns, schools, good roads. Booklet free. Swigart Land Co., 2126 First Nat'l Bank Bldg., Chicago, Ill.

FRUIT FARM—75% ACRES. 15 ACRES PEACHES. 60 acres crops. 1,300 fruit trees. Black loam and clay land on river bank near Port Clinton, Ohio. Live stock, farm implements, seven-room house and buildings, deep well. Free title. Owner retired. Bargain. Address P. W. O., care of American Fruit Grower, Chicago.

SPECIAL "GET-TOGETHER-ON-FLORIDA" FARM home offer limited to 50 men. Chance of a lifetime. \$5 a month buys 10-acre farm tract in midst of beautiful lake region where the fine oranges grow. Only \$19 an acre; limit 40 acres to a buyer. Bankers and business men say this land should bring \$100 to \$150 an acre when paved roads completed. Near Tampa. Don't wait, write. Tampa Bay Land Co., Suite 808, Citizens Bank Bldg., Tampa, Fla. Old, strong, reliable company.

EXCHANGE CLOSES GREAT SEASON

The service charge made by the California Fruit Growers' Exchange during the past season averaged 5.51 cents a box, according to the annual report of the association for the year ending August 31, 1920. This service charge included the maintenance of all exchange departments, salaries and expenses of agents, brokerages, daily market news service, collection of claims, legal expenses and the other activities of the association. The total shipments of fruit made by the exchange were 12,144,964 boxes of oranges, 3,452,534 boxes of lemons and 226,266 boxes of grape fruit, requiring an aggregate of 34,461 cars for transportation of the crop to market. The total shipments of citrus fruits from the state amounted to 46,757 carloads.

The valuation of the fruit shipped by the exchange, f. o. b. California, is placed at \$59,221,329, and includes those cars unsold at the time the report was made. On this basis, it is estimated that the valuation of the citrus crop for the season will amount to \$81,200,000 which, with a cost of \$25,400,000 for freight and refrigeration, makes the delivered value of the fruit amount to \$106,600,000.

The shipments made by the California Fruit Growers' Exchange for the season just closed represent 73.7 per cent of the total shipments of citrus fruits from the state. This is an increase of 1.4 per cent over the preceding year. The membership in the exchange now amounts to 10,500 members.

One of the impressive items in the report is the statement that the losses from bad debts and uncollected bills amounted to but \$435.83, or 3-4000 of one per cent of the f. o. b. value of the fruit. During the past 17 years the business of the exchange has amounted to \$376,000,000, and the losses of all kinds during this period approximated \$8,775, or 9-4000 of one per cent of the f. o. b. returns.

Amateurs who are interested in the budding, grafting and propagation of plants should secure a copy of Bailey's Nursery Manual. It is a most complete treatise and is written in a simple, easy-to-understand manner.

The sun drying of fruits is very rapidly giving way to evaporation in especially constructed buildings, where sanitary conditions may be regulated and the time required for evaporation reduced to the minimum. It is expected that sun drying will very soon become obsolete.

STATEMENT

OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912.

Of American Fruit Grower, published monthly at Chicago, Illinois, for October 1st, 1920.

State of Illinois, County of Cook, ss. I, Robert B. Campbell, a notary public in and for the State and county aforesaid, personally appeared Robert B. Campbell, who, having been duly sworn according to law, deposes and says that he is the publisher of the American Fruit Grower and that the following is, to the best of his knowledge and belief, a true and correct statement of the ownership, management (and if daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Robert B. Campbell, Chicago, Ill.; Editor, Samuel Adams Greenwood, Va.; Managing Editor, E. H. Favor, Chicago, Ill.; Business Manager, W. Orlinmann, Chicago, Ill.

2. That the owners are: (Give names and addresses of individual owners, or, if corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) Mary Lee C. Adams, Greenwood, Va.; Robert B. Campbell, Richmond, Va.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

Sworn to and subscribed before me this 20th day of September, 1920.

(Seal) JESSE F. JENKINS, Notary Public

Peach Trees—June Budded

Apple Trees—1 year

Strawberry Plants—Standard Sorts and Everbearing

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Chattanooga Nurseries, Chattanooga, Tenn.

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If you stammer attend no stammering school till you get my new FREE book entitled "STAMMERING, its Origin and its Advanced Natural Method of Cure." Ask for special rate and a FREE copy of "The Natural Speech Manual." Largest and best school for stammerers in the world. Write today. The North-Western School, 2304 Grand Ave., Milwaukee, Wis.

3 TIMES BRIGHTER STEEL MANTLE BURNER

Generates and burns gas from kerosene in ordinary lamp. White light. No smoke—no odor. Guaranteed. Send dealer's name and address and your name and address with 40 cents for burner if he cannot supply.

Agents wanted. Write now. STEEL MANTLE LIGHT COMPANY, 4040 Cottage Grove, Chicago.

RATE, 15 CENTS PER WORD CASH WITH ORDER

FARMS IN THE FRUIT, POTATO AND GRAIN belt of Michigan. List now ready. Miller & Morse, Licensed Brokers, Edmore, Mich.

VIRGINIA ORCHARDS AND FARMS IN BEST fruit and farming country. Fine, very desirable. Healthful climate and beautiful country. State wants and get descriptions. Wilder & Co., Charlottesville, Va.

SHAWNEE, OKLAHOMA, CENTER OF A GREAT farming country. Write for free agricultural booklet. Board of Commerce, Shawnee, Oklahoma.

MISCELLANEOUS

FRUIT PICKER—PICKS APPLES AND PEARS, NO ladder necessary, best picker made, \$1 for metal part and full directions. P. W. Stafford, Box 104, Saginaw, W. S., Mich.

HONEY OF SUPERIOR QUALITY, PACKED IN 12 to 120 pound containers. Also Green County's Famous Cheese, in family size packages. It will pay you to get my FREE price lists before ordering elsewhere. E. P. Rosa, Monroe, Wis.

VIOLINS WITH COMPLETE OUTFITS FOR SALE. Buy local. Easy monthly payments. If wanted, Write Miss Bertha Mardis, Shawnee, Kansas.

RIPE FRUIT! FANCY VARIETIES ORANGES AND grapefruit. Express prepaid. Bussell baskets \$5. Standard crate \$7.50. Shipping dates 10th and 25th each month. E. O. Carver, Auburndale, Florida.

WE COLLECT ACCOUNTS, NOTES, CLAIMS, ANY- where in world. No charges unless we collect. May's Collection Agency, Somerset, Ky.

ATTENTION—FRUIT AND POTATO GROWERS AND shippers. For sizers, sorters, carriers, elevators, packing house supplies, write to Price Manufacturing Co., Inc., Yakima, Washington.

HOW ABOUT YOUR CIDER? GOING TO PUT some in clear, new whitewood, paraffined, tight kegs? Write J. D. Hollingshead Co., 208 S. La Salle St., Chicago, Ill., for prices, stating quantity and sizes wanted.

A DEFINITE APPLE BARREL SUPPLY—KNOCKED down standard size apple barrels! Write immediately for free booklet fully illustrating the Hollingshead Gold Standard Shook. J. D. Hollingshead Co., (Cooperage), LaSalle and Adams St., Chicago, Ill.

BABY CHICKS 15 CENTS EACH, POSTAGE ON press paid by us, on all orders received before 15th for delivery any date you desire during 1921. Safe delivery guaranteed anywhere in U. S. Highest quality. We ship from Chicago, Cincinnati, Philadelphia, Minneapolis, Des Moines and Kansas City. Full information sent FREE. Write today. Address mail to main office, National Chick Co., Dept. 1, Railway Exch. Bldg., Kansas City, Mo.

MOLASSES—KENTUCKY COUNTRY SORGHUM made the good "old fashioned way." Pure molasses, no adulterants. Sample and price list sent for 10c. S. Rosenblatt, Haverhill, Ky.

"THE SURE SHEPHERD." MOONKEY'S HEAVENLY devotional booklet, sent entirely free. Address Pittsburgh Publishing Company, Dept. 13, Bessemer Building, Pittsburgh, Pennsylvania.

PARLOR BROOMS—SEND US \$1 AND WE WILL ship you prepaid one of our high grade brooms for \$2.50. Money refunded if dissatisfied. Batavia Broom Works, Batavia, Ill.

PUREBRED REGISTERED HOLSTEINS, CHERRY blood lines, all ages, either sex. Also high grade Holstein calves, either sex. F. H. Wood, Box 1, Orono, N. Y.

LOST HEIRS—A 400-PAGE BOOK, FILLED WITH names for lost heirs and missing kin, from all parts of the world. Chancery Court of England, Ireland and Bank of England lists included; price 10c. International Claim Agency, 236, Pittsburgh, Pa.

PLANTS, TREES AND SEEDS

BLACK RASPBERRY PLANTS, CUMBERLAND for \$10. Thousand, \$15. Aromatic strawberry plants \$7 thousand. Dahlias, mixed, all colors, \$5 for \$7. Dahlias, mixed colors, \$3 hundred. Satisfaction guaranteed. Order today direct from this ad. Payne, Box 10A, Shawnee, Kansas.

HUCKLEBERRIES—LARGE, SWEET DOMESTIC clusters. Liberal package bearing plants, packed in \$1. Educational Promoting Company, Warren, Pa.

PEACH AND APPLE TREES AT BARGAIN prices to planters in small or large lots by express, post or freight. Fine lot of June Bred cherry trees, plum, pear, cherries, grapes, berries, nuts, etc. Shade and ornamental trees and shrubs. Free sixty-eight page catalog. T. W. Nursery Co., Cleveland, Tenn.

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Copyright 1920, by The Goodyear Tire & Rubber Co.

What Is a Good Spray Hose?

A good spray hose is one you can depend on to perform smoothly and steadily, no matter how severe the operating conditions may be.

Judged by this test, Goodyear Monterey Spray Hose, built to meet the service required, is the hose you want.

Goodyear Monterey Spray Hose withstands the rotting action of the strongest spraying solutions. For it is lined with a rubber tube, especially compounded for this purpose.

Goodyear Monterey Spray Hose holds the severest pressures without the slightest difficulty. For the stubborn strength of its tube is reinforced by a

body built up of plies of heavy friction fabric. Toughly constructed throughout, this standard hose unflinchingly bears the brunt of being pulled over trucks and wagons and over the harsh, rough surfaces of orchard or garden.

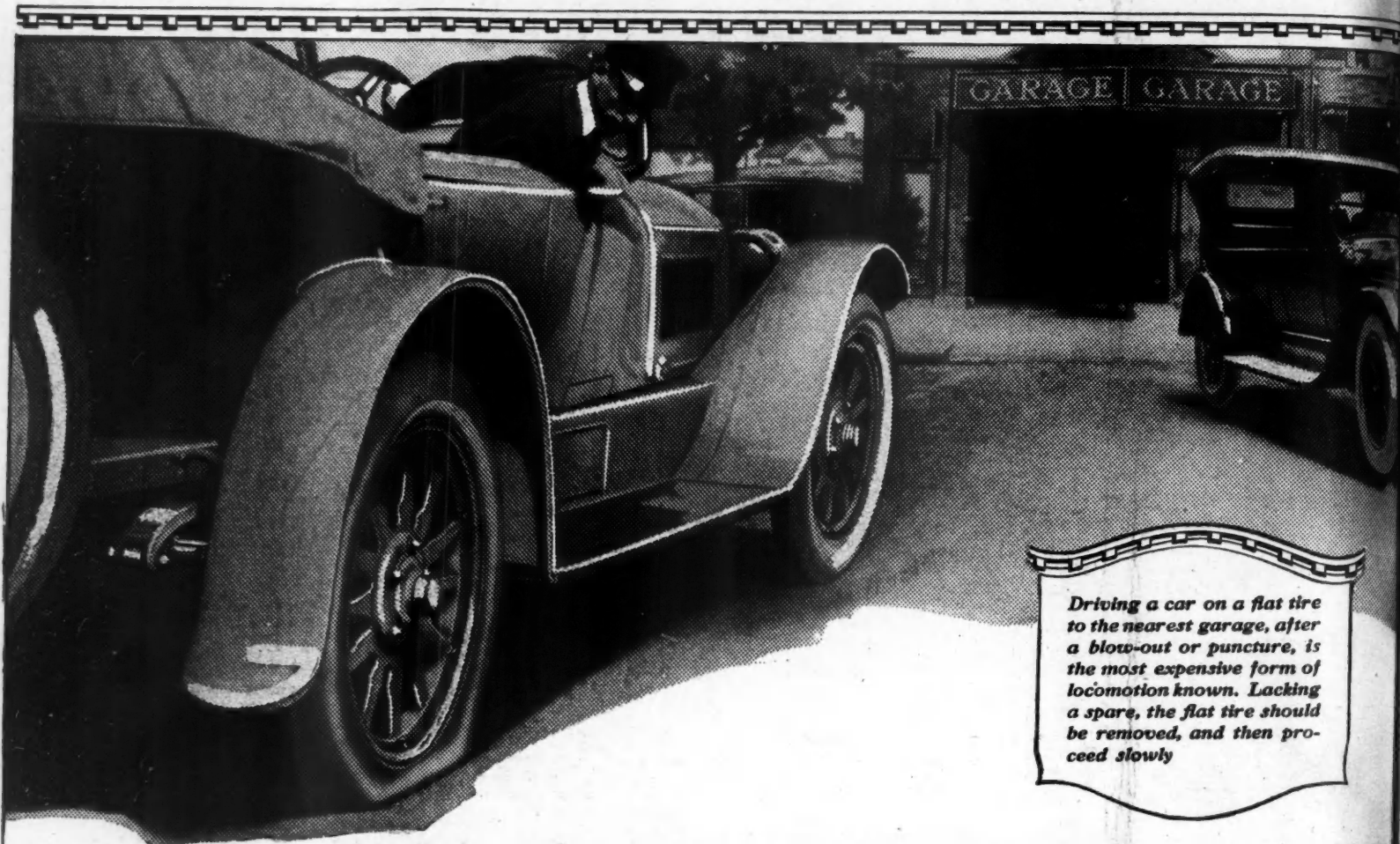
And this good hose is not only supremely strong; it is light as well, making it easy to handle.

For further information about Goodyear Monterey Spray Hose, which like all other Goodyear Products is built to protect our good name, write to The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR

SPRAY HOSE

When will Tire Waste and Extravagant Tire Buying End



Driving a car on a flat tire to the nearest garage, after a blow-out or puncture, is the most expensive form of locomotion known. Lacking a spare, the flat tire should be removed, and then proceed slowly

THERE are signs that intelligent motorists are beginning to give more thought and care to the selection of their tires.

The trouble has been that the average car owner accepted his tire losses too meekly—as though nothing could be done about it.

As one new make of tire after another came on the market and old tires worked up new selling features and talking points, car owners no sooner got through buying one make of tire than they began to look around for a different make.

Ready to take advantage of all this shifting of trade was the irresponsible dealer, with his makeshifts, his compromises, his plausible tire experiments.

His whole attitude was one of secrecy and evasion. He believed in feeling out each individual motorist's weakness and playing to that, rather than in helping every motorist to know more about tires.

* * *

The motorists of this country have stood for a lot. They are beginning to do something about it.

Going to the good dealer—the man who is winning a greater measure of

public confidence all the time—the man who believes in this principle—

That the best introduction any tire can have is the truth.

Quality is the basis on which his business is founded. And all his efforts are directed towards encouraging a wider appreciation of quality.

He is the man whom the United States Rubber Company is backing with all of its resources.

With all of its great and wide and long and varied experience. Longer and more varied than that of any other rubber manufacturer.

* * *

Go to the good dealer and get a legitimate tire.

For you, at least, tire waste will then end.

United States Tires

United States  Rubber Company

*Fifty-three
Factories*

*The oldest and largest
Rubber Organization in the World*

*Two hundred and
thirty-five Branches*